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ABSTRACT

The purpose of this study was to determine the relationships between attributes of faculty and administrative involvement, sources of internal and external funding, and characteristics of student outcomes assessment at U.S. two- and four-year higher education institutions. Data from selected items of the National Center for Postsecondary Improvement's Project 5.2 Inventory of Institutional Support for Student Assessment (ISSA) (M. Peterson, M. Einarson, C. Augustine, and D. Vaughan, 1999) were used to analyze the relationships among faculty involvement, administrative involvement, sources of funding, and best practices of comprehensive student outcomes assessment programs. Data were ISSA responses from 1,393 institutions. The study demonstrates that faculty and administrative involvement in student outcomes assessment, as well as diversity in funding sources, are significant predictors of the quality of student assessment programs in postsecondary institutions. Seven appendixes present instruments used in the study and some additional information about best practices and data collected. (Contains 60 tables and 85 references.) (SLD)

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THE RELATIONSHIPS AMONG SELECTED CHARACTERISTICS OF STUDENT OUTCOMES ASSESSMENT PROGRAMS AT AMERICAN TWO- AND FOUR-YEAR HIGHER EDUCATION INSTITUTIONS

A Dissertation

Presented for the

Doctor of Philosophy

Degree

The University of Mississippi

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ABSTRACT

The purpose of this study was to determine the relationships between attributes of faculty and administrative involvement, sources of internal and external funding, and characteristics of student outcomes assessment programs at American two- and four-year higher education institutions. Student outcomes assessment is the objective evaluation of instructional programs and services to improve teaching and learning (McLeod & Atwell, 1992; Wolf, 1993). Faculty leadership of outcomes assessment ensures program success (Diamond, 1998; Nichols, 1995). Assessment experts suggested that assessment programs would not survive without administrative influence (Johnson et al., 1991; Palomba & Banta, 1999). Most successful outcomes assessment programs use diverse sources of funding (Nichols, 1991, 1995). Data from selected items of the National Center for Postsecondary Improvement's Project 5.2 Inventory of Institutional Support for Student Assessment (Peterson, Einarson, Augustine, & Vaughan, 1999) were used to analyze the relationships among faculty involvement, administrative involvement, sources of funding, and best practices of comprehensive student outcomes assessment programs. This study demonstrated that faculty and administrative involvement in student outcomes assessment, as well as diversity in funding sources, are significant predictors of the quality of student assessment programs in postsecondary institutions.

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CHAPTER 1

INTRODUCTION

Before the 1980s, higher education excellence referred to an institution's prestige or its quality and quantity of resources (Astin, 1991). Specifically, excellent institutions typically had eminent academic reputations or much money, high quality faculties, and high quality students (Astin, 1999). Studies of the excellence of American higher education conducted in the early 1980s influenced measurements of the quality of educational experiences that occurred in the late 1980s (Morris, 1994). Gardiner (1994) described a quality education as having clear outcomes, a supportive learning environment, frequent assessment and feedback, and high student performance expectations. In the mid 1980s, a variety of higher education institutions determined how to implement quality principles in the educational setting, and education accreditors set minimum levels of quality assurance in accreditation standards to evaluate quality compliance (Freed, Klugman, & Fife, 1997; Todd & Baker, 1998). As quality improvement became more important, systematic assessment of academic and administrative institutional divisions became necessary (Chaffee & Sherr, 1992; Freed et al.; Morris).

Astin (1991) suggested that higher education excellence would be impossible without student outcomes assessment. Banta (1993) asserted that institutional improvements are detrimental to student retention and learning. Palomba and Banta

(1999) acknowledged that student outcomes assessment programs matured throughout the 1980s and 1990s, as stakeholders increasingly required higher education improvements. A student outcomes assessment program guides an institution through a data gathering process, which encourages effective decision-making (Banta, 1997). Consequently, Astin, Banta, and Nichols (1995) said that particular conditions and people are necessary for developing successful student outcomes assessment programs.

Results from a 1990 Higher Education Panel sample survey of American colleges and universities verified that over 800 of 2,600 nonspecialized degree-granting institutions implemented student outcomes assessment programs after 1980 when assessing student learning outcomes gained importance (Johnson, Prus, Andersen, & El-Khawas, 1991). Johnson et al. described student outcomes assessment programs as comprehensive and systematic efforts to evaluate students' basic college skills, general education, major field knowledge, career preparation, and overall personal growth. Johnson et al. found in their 1990 survey that almost ninety percent of the Higher Education Panel colleges and universities surveyed had implemented some student outcomes assessment practices but not comprehensive outcomes assessment programs. In 1999, results from the National Center for Postsecondary Improvement's (NCPI) Project 5.2 Inventory of Institutional Support for Student Assessment (ISSA, see Appendix A) substantiated that student outcomes assessment practices are used, but comprehensive programs are not institutionalized at most American public and private non-profit, Carnegie classified (Appendix B) colleges and universities reporting to the six regional accrediting agencies (Peterson, Einarson, Augustine, & Vaughan, 1999). Peterson et al.

suggested that student outcomes assessment programs at American higher education institutions have grown under special circumstances, which have been beneficial for student outcomes assessment implementation but not for outcomes assessment program growth.

Student outcomes assessment proponents (leaders, coordinators, etc.) at American colleges and universities must understand and appreciate the current state of comprehensive assessment programs as educational quality improvement becomes more important to students, employers, parents, legislators, and other stakeholders (Palomba & Banta, 1999). The Peterson et al. (1999) findings suggested that faculty members have not served as chairs of assessment planning committees as often as academic administrators. Both the Johnson et al. (1991) and the Peterson et al. studies concluded that faculty must take the leadership roles in implementing and maintaining assessment programs while administrators must support faculty by providing managerial and organizational expertise. Administrative leadership of assessment planning may work during the establishment of outcomes assessment programs, but sustaining successful programs requires influential faculty leadership (Johnson et al.; Nichols, 1995; Peterson et al.). Bogue and Saunders (1992) explained that because student outcomes assessment is a relatively new (and often controversial) administrative function at American colleges and universities, academic departments have a tendency to accept outcomes assessment programs led by faculty members more willingly than programs led by administrators. Unquestionably, student outcomes assessment programs, which focus on the improvement of instructional programs and services, are more successful (with faculty members) when supported by the chief academic officer of the institution (Nichols & Wolff, 1990). However, institutional effectiveness programs, which focus on the improvement of instructional and educational support programs and services, are more successful (across campus) when supported by the chief executive officer of the institution (Nichols & Wolff). Being able to recognize existing faculty and administrative relationships at institutions will allow assessment practitioners to build outcomes assessment programs on existing foundations rather than "from the ground up."

Carefully planned and coordinated comprehensive student outcomes assessment programs should continually inform decision-makers about student academic competencies and deficiencies (Halpern, 1987a). Faculty members actualize student outcomes assessment by developing student outcomes reflecting the institution's intended purpose and documenting how the institution's achieved outcomes help accomplish that purpose (Pratt, 1991). Selecting the appropriate intended student outcomes affects the choice of assessment methods and the efficiency of the assessment program (Gardiner, 1994; Prus & Johnson, 1994). In an organized assessment program (Nichols, 1995), the comparison of intended student outcomes with actual student outcomes influences the appropriate use of assessment results. An inappropriate use of assessment results, for example, is making retention or tenure decisions while the reason for student outcomes assessment is improving student learning (Halpern).

For the purpose of this study, the best practices of student outcomes assessment programs are defined to be the characteristics (Appendix C) in the ISSA (Peterson et al., 1999) items that relate to types, or outcomes, of student assessment; student assessment methods; planning and coordinating student assessment; academic planning and review; and academic decision-making. Demonstrating student outcomes assessment best practices is significant for describing progress as well as determining how to improve assessment programs (North Central Association of Colleges and Schools Commission on Institutions of Higher Education, 2000).

The characteristics of faculty involvement in student outcomes assessment programs (Appendix D) are the items in the ISSA (Peterson et al., 1999) that relate to supporting, planning, and coordinating student assessment. Faculty leadership of student outcomes assessment programs ensures program success (Diamond, 1998; Halpern; Morris, 1994; Nichols, 1991). Understanding the relationship between faculty and outcomes assessment best practices will enable the institutionalization of effective assessment programs at most American higher education institutions.

Administrative involvement in student outcomes assessment programs (Appendix E) relates to items in the ISSA (Peterson et al., 1999) concerning the institutional officers who have responsibility for support, planning, and coordination activities. These officers are usually the Chief Executive Officer, the Chief Academic Officer, the Chief Student Affairs Officer, the Institutional Research officer, the Academic Evaluation officer, and the Student Assessment officer. Understanding the relationship between administrative involvement and student outcomes assessment best practices will enable the development of assessment programs.

Utilizing a variety of funding sources such as the Fund for the Improvement of Postsecondary Education (FIPSE), state incentive programs, and academic budgets

(Appendix F) to improve student outcomes assessment practices is important for initiating and sustaining outcomes assessment programs (Peterson et al., 1999). Institutions may use external funding sources such as federal or state agencies or internal funding sources such as operating budgets or performance rewards to support student outcomes assessment programs (Nichols, 1991). Furthermore, expanding outcomes assessment programs need but should have operating budgets and resources for training assessment leaders (North Central Association of Colleges and Schools Commission on Institutions of Higher Education, 2000).

Additional quantitative research was needed to explore well-established student outcomes assessment programs and the support systems in place to ensure their effectiveness. Assessment practitioners require information that will help them improve the organization and management of student outcomes assessment programs. Peterson et al. (1999) concluded that student outcomes assessment is common in American higher education, but relationships among institutional units, faculty roles, and uses of student assessment results need further exploration. For instance, if certain faculty, administrative, and funding elements are present at an institution, the institution may have a sufficient foundation for establishing a comprehensive student outcomes assessment program. This study was designed to address research questions that have been posed by assessment experts concerning relationships that contribute to the development and preservation of student outcomes assessment programs.

Statement of the Problem

The purpose of this ex post facto research study was to identify the relationships among certain institutional characteristics and the extent to which an institution assesses student outcomes. The independent variables were several measures of faculty and administrative involvement in decision-making and the availability of funds to improve student assessment practices. The dependent variable was the extent to which an institution uses "best practices" in assessing student outcomes. Data on these variables for institutions at the associate, baccalaureate, master's, doctoral, and research levels under public and private control from six accrediting regions (Middle States, New England, Northwest, North Central, Southern, and Western) were examined.

Hypotheses

1. There is no significant relationship between faculty involvement in decision-making, as measured by an index of faculty involvement in student outcomes assessment decision-making, and the prevailing student assessment "best practices" used at institutions responding to the Inventory of Institutional Support for Student Assessment by institutional control, Carnegie Classification, regional accrediting agency, or 1995 grouped undergraduate enrollment.
2. There is no significant relationship between administrative involvement in decision-making, as measured by an index of administrative involvement in student outcomes assessment decision-making, and the prevailing

student assessment "best practices" used at institutions responding to the Inventory of Institutional Support for Student Assessment by institutional control, Carnegie Classification, regional accrediting agency, or 1995 grouped undergraduate enrollment.

3. There is no significant difference between variety of funding sources used to improve student assessment practices, as measured by an index of funding sources, and the prevailing student assessment "best practices" used at institutions responding to the Inventory of Institutional Support for Student Assessment by institutional control, Carnegie Classification, regional accrediting agency, or 1995 grouped undergraduate enrollment.

4. There is no significant relationship between faculty and administrative decision-making involvement and types of funding used to improve student assessment, as measured by indexes of faculty and administrative involvement and types of funding, and the prevailing student assessment "best practices" used at institutions responding to the Inventory of Institutional Support for Student Assessment by institutional control, Carnegie Classification, regional accrediting agency, or 1995 grouped undergraduate enrollment.

5. There are no significant differences in the prevailing "best practices" used at institutions responding to the Inventory of Institutional Support for Student Assessment by institutional control, Carnegie Classification, regional accrediting agency, or 1995 undergraduate enrollment group.

Definition of Terms

The following operational terms and definitions were used for the purpose of this study to describe background information, to relate the significance of research, and to identify concepts under investigation. Terminology definitions provided the necessary consistency in collecting, developing, and analyzing data (AAHE Assessment Forum, 1992; McLeod & Atwell, 1992; North Central Association of Colleges and Schools Commission on Institutions of Higher Education, 2000; Palomba & Banta, 1999; Wolf, 1993).

1995 Grouped Undergraduate Enrollment: Peterson et al. (1999) grouped the institutions responding to the ISSA by their 1995 undergraduate enrollments as follows: (a) less than 1,000 students; (b) 1,000 to 2,000 students; (c) 2,000 to 3,000 students; (d) 3,000 to 5,000 students; (e) 5,000 to 10,000 students; and (f) greater than 10,000.

Assessment: Assessment is an analytical process of objectively evaluating an institution's educational programs or students against established standards to provide information for improving instructional methods and student learning outcomes.

Assessment Plan: The assessment plan is the document that associates the institution's purpose, mission, goals, and outcomes or objectives with assessment methods.

Assessment Report: An assessment report is a document used for recording an institutional unit's: (a) support of the institutional mission, (b) goals, (c) intended outcomes or objectives, (d) assessment methods, (e) assessment results, and (f) the use of assessment results to improve unit programs or services.

Best Practices: Examples of elements, or practices, that assessment experts advocate for institutionalizing continuous improvement of instructional methods and student learning are: (a) repeatedly evaluating students throughout college experience, (b) assessing students using multiple methods, (c) using assessment coordinators and committees for support and planning, (d) reflecting on teaching and planning for learning, and (e) using assessment results to improve instructional and educational support programs and services.

Carnegie Classification: A typology used to describe American colleges and universities that are degree granting and accredited by an agency recognized by the United States Secretary of Education. Appendix B lists the definitions of the Carnegie Classifications.

Evaluation: Evaluation is a term that means to determine the value of something; it is used interchangeably with the terms "assessment" and "measurement."

Excellence: Excellence refers to the high quality institutional performance that reflects the institution's commitment to mission accomplishment and allows the institution to surpass its peers in the provision of teaching, research, and service.

Goal: A goal is a division of the institution's mission that defines a performance parameter and is achieved through the exertion of effort and the accomplishment of one or more objectives.

Institutional Control: Control refers to the public, private non-profit, or private for-profit primary support structure of American colleges and universities. A public institution may be state-controlled or state-supported depending on whether the government operates or subsidizes the institution. A private institution has its own governing board, does not receive primary financial appropriations from a state budget (but may receive public funds through contracts, grants, or student financial assistance), and is chartered as either a non-profit or for-profit corporation, either of which follows its own administrative policies.

Institutional Effectiveness: Institutional effectiveness is the achievement of institutional goals and the demonstration of the quality of goal achievement. Institutional effectiveness provides data for describing the institution and identifying weaknesses.

Measure: In relation to student outcomes assessment, a measure is an established value standard that is used to evaluate objectives.

Mission: The mission is the internally defined statement of the institution's purpose, which is divided into goals for accomplishment by the organization.

Objective: An objective is an end of action, which may serve as a guideline for attaining a goal.

Outcome: An outcome is a result of the realization of an objective.

Process: In student outcomes assessment, the process is the sequence of activities leading through the assessment of student outcomes to the use of results to improve programs and services.

Purpose: The purpose is the externally defined statement that describes the institution's end to be attained, or function in society.

Quality: Quality is the degree of excellence to which products conform to production requirements.

Regional Accrediting Associations: Regional accrediting associations divide the United States into geographic regions, which are governed bodies that establish educational improvement standards.

Student Outcomes Assessment: Student outcomes assessment is the objective evaluation of instructional programs and services to provide information for improving teaching and learning.

Delimitations and Limitations of the Study

The researcher delimited the study to the selected student assessment best practices, faculty, administrative, and funding items in the five sections (Appendix A) of the NCPI Project 5.2 ISSA. The first limitation of this study is that the researcher did not create this survey. The second limitation of the study is the institutional climate, the perceptions and attitudes toward organizational life, discussed in this report as assessment management policies, assessment support systems, and organizational members' commitment to assessment programs (Peterson et al., 1999). Climate was identified by Peterson et al. in the literature review but not included in the ISSA and thus, not considered in the institutional responses. Therefore, the survey respondents' true views about student assessment efforts at their institutions are not known. The third limitation concerned the person who actually responded to the ISSA (assumed to be the Chief Academic Officer) and whether that person genuinely was the most familiar with the institution's student outcomes assessment program. Peterson et al. (1999) acknowledged that the ISSA was sent to the Chief Academic Officer at each of the 2,524 colleges and universities. However, the survey instructions encouraged the Chief Academic Officer to forward the survey to the individual or office most familiar with the student outcomes assessment program. It is possible that the person most familiar with the student outcomes assessment program might not have actually received or completed the ISSA. The fourth limitation of the study was that the researcher assumed the institutional responses were representative of most institutions in the population of American higher education institutions. Therefore, the results of this study should generalize to most U.S. institutions.

Organization of the Study

This study is described in five chapters. Chapter 1 introduces the research study presenting a statement of the topic, the theoretical framework, a statement of the problem, the hypotheses for the study, a statement concerning the significance of the study, operational definitions for specific terms used in the study, and delimitations and limitations. Chapter 2 provides a review of the current literature related to the introduction and implementation of student outcomes assessment programs at American higher education institutions. Chapter 3 describes the subjects, instrument, procedures, and data analyses of the study. Chapter 4 provides the results of the research study and an analysis of data. Finally, the conclusions, discussion, and recommendations are presented in Chapter 5.

CHAPTER 2

LITERATURE REVIEW

This chapter presents in detail the development of comprehensive student assessment programs at higher education institutions. First, however, the chapter presents (a) the call for educational excellence from higher education stakeholders, (b) the condition of institutional effectiveness, and (c) the improvement of student learning using student outcomes assessment.

Educational Quality

The early 1980s brought many state and national explorations into the excellence of American colleges and universities, and the pursuit of educational excellence ultimately influenced the assessment of student learning (Astin, 1987, 1991; Folger & Harris, 1989; Morris, 1994). America realized that foreign products were superior to American products, and American colleges and universities received the blame for not educating competent students (Mayhew, Ford, and Hubbard, 1990). Ewell (1999) explained that student learning assessment dates to 1980 when state governors, who wanted the American public to understand the influence of higher education excellence, told Americans that higher education's purpose in American economic competitiveness was to train leaders and managers for international businesses. Until the 1980s, higher education excellence was considered either institutional prestige or the quality and quantity of institutional resources (Astin; Miller, 1979). Although most of the concerns about educational quality surfaced by the mid-1980s, Miller predicted that the American public—specifically the stakeholders of higher education—would closely examine the purposes, goals, objectives, management, and leadership until improvements were made.

Over the past twenty years, increased enrollments and decreased public funding have encouraged stakeholders to question the value of higher education (Gaither, 1998; Miller, 1979; Resnick, 1987). The enrollment and funding conditions influenced colleges and universities to increase tuition to cover costs of providing educational experiences during the early 1980s (Bergquist, 1995; Miller). Although American institutions would not admit that degrees were low quality and could not be improved, most institutions did not use a standard definition of quality to guide educational degree design (Bogue & Saunders, 1992). Consequently, national studies ensued to discern the value of an expensive higher education (Astin, 1987, 1991; Bogue & Saunders; Mayhew et al., 1990). A genuinely valuable and high-quality academic experience must be attractive and functional to stakeholders, beneficial and distinctive to the institution's community, congruent with the institution's purpose and actions, and growth producing for all learners (Berquist & Armstrong, 1986). The findings of the studies suggested to decide the purpose of higher education, redefine educational excellence, and establish standards for evaluating educational excellence (Astin, 1987, 1991; Resnick, 1987) to provide students an excellent educational experience that would improve the quality of American products (Mayhew et al.). Thus, the first step toward returning America to international industrial excellence had to be to improve the quality of American higher education (Astin, 1987, 1991).

The early 1980s studies of American higher education excellence influenced the late 1980s measurement of educational experience quality, and a primary administrative concern of the early 1990s was applying quality concepts of business and industry to higher education (Astin, 1987, 1991; Freed et al., 1997; Gardiner, 1994; Morris, 1994). Gardiner defined education quality as having clear outcomes, frequent assessment, meaningful feedback, supportive environments, and high expectations. Because the purpose of higher education is educating students, most teaching, research, and service activities have some measurable quality (Miller, 1979). A variety of higher education institutions determined early in the 1980s how to implement quality principles in an educational setting, and education accreditors revised accreditation standards to ensure a minimum standard of quality assurance (Freed et al.; Todd and Baker, 1998). The changes in accreditation standards (peer visits and reviews required by accrediting agencies) inspired institutional administrators to take responsibility for quality assurance (Todd & Baker). As quality improvement became more important, the assessment of academic and administrative outcomes and objectives became necessary (Chaffee & Sherr, 1992; Freed et al.; Morris), and the new focus on using assessment data to improve student learning significantly increased the quality of the higher education experience (Astin, 1991; Boud, 1990).

Whereas student outcomes are assessed at the end of a course, program, or degree; quality is assessed at every point during a particular process (Chaffee and Sherr, 1992). Therefore, a quality assessment is more thorough than a student outcomes assessment, but even the most stringent regional accrediting associations do not require a quality assessment to maintain accreditation (Commission on Colleges of the Southern Association of Colleges and Schools, 1998). Kretovics and McCambridge (1999) acknowledged that student outcomes assessment relates more to quality assurance than accreditation assurance, and Halpern (1987b) claimed that student learning is more significant when assessing quality than institutional reputation. Accreditation and accountability desires of stakeholders (students, parents, employers, legislators, etc.) encouraged the less proactive institutions to implement some form of quality assessment (Freed et al., 1997). Because higher education is necessary for career success but comes at a substantial cost, stakeholders want to ensure that money spent on higher education is well spent (Morris, 1994; Resnick & Goulden, 1987). Astin (1987) insisted that most stakeholders nevertheless continue to identify (as excellent) the rich institutions with famous faculty. Thus, measuring (or assessing) the excellence (or quality) of an institution's educational programs yields data that can be used by stakeholders to make funding decisions (Chaffee & Sherr; Diamond, 1998). Kretovics and McCambridge emphasized that gathering assessment data provides an opportunity for stakeholders to communicate with institutions. For instance, the responses from a survey of stakeholders ought to describe enough specific knowledge, skill, and attitude outcomes to improve an educational experience (Kretovics & McCambridge).

Institutional Effectiveness

For the higher education mission of teaching, research, and service, institutions must create appropriate purposes, formulate goals based on such purposes, implement procedures to assess goal achievement, and use assessment results to improve the effectiveness of instructional and administrative programs and services (Commission on Colleges of the Southern Association of Colleges and Schools, 1998). Miller (1979) explained that objectives are the paths taken to achieve an institution's principal goals, and that these objectives are linked to the institution's vision, purpose, and mission. Krueger (1993) maintained that institutions must want to ask if values, purposes, and goals were achieved each time that a student earned a degree. The institutional purpose, from which the mission originates, organizes the planning and evaluation systems, the choice of assessment methods, and the use of assessment results to improve programs and services (Commission on Colleges of the Southern Association of Colleges and Schools). Objectives having reasonably measurable outcomes are most useful for achieving an institution's goals (Miller).

Institutional effectiveness requires the evaluation of educational products against established standards and documentation of evaluation results (McLeod & Atwell, 1992; Welker & Morgan, 1991). Student learning assessments before, during, and after educational experiences provide enough data that institutional planners can use to improve instructional and educational support effectiveness with short- and long-term plans, policies, and procedures (Folger & Harris, 1989; Gardiner, 1994; Miller, 1979).

Institutional effectiveness depends on most of the administrative functions of a college or university: governance, accountability, mission, purpose, goals, power, planning, resource allocation, strategic planning, academic planning, evaluation, and institutional research (Commission on Colleges, 1998; Nichols, 1991; Todd & Baker, 1998; Welker & Morgan, 1991). Because of the dependence on so many administrative functions, Nichols asserted that an institution would have three different roles to guide the institution's effectiveness: an academic planner, a departmental facilitator, and an assessment coordinator. In addition, because implementing an institutional effectiveness program uses much money, funds will have to be allocated from various sources until the program is on solid ground, and the program is a regular budget item (Nichols).

Since some higher education institutions are dependent on considerable public money, such institutions should not mind demonstrating institutional effectiveness along with good organizational management (Resnick & Goulden, 1987). Colleges and universities frustrated the public during the early 1980s by not demonstrating institutional effectiveness in exchange for financial support or increased tuition (Todd & Baker, 1998). In fact, Fincher (1991) pointed out that institutional effectiveness activities allow institutions that are intensely scrutinized by public critics to demonstrate value in their communities.

Institutionalized effectiveness activities are advantageous for generating data to solve problems that require much institutional information (Todd & Baker, 1998). Todd and Baker emphasized that faculty and administrators would appreciate and accept a permanent institutionalized effectiveness program more than a temporarily implemented program for maintaining accreditation. Gaining the support of senior faculty helps the effectiveness efforts gain institutional acceptance (Johnson et al., 1991; Nichols, 1991, 1995; Todd & Baker).

Considering that institutional mission enhancement is the primary purpose of institutional effectiveness activities, student outcomes assessment is used to ascertain potential improvements that an institution could make to expand students' educational experiences (Krueger & Heisserer, 1987; Todd & Baker, 1998). For preserving importance at an institution, both institutional effectiveness and student outcomes assessment require chief officers' participation and endorsement (Nichols, 1991). Additionally, while regional accreditation could be a key influence on the sustainability of institutional effectiveness, the endurance of student outcomes assessment depends on the strength of the relationships among the stakeholders, the assessment coordinators, and the curriculum planning committee (Kretovics & McCambridge, 1999; Todd & Baker).

Improving Student Learning

In the early 1980s, national critiques of American higher education purported that college graduates could not read, speak, or write at the expected bachelor's degree ability levels (Astin, 1987, 1991; Morris, 1994; Palomba & Banta, 1999). Educational experts' suggestions for American higher education invariably included improving instructional techniques, revising curricula, and instituting systematic assessment programs to evaluate and improve student learning (Astin, 1991; Cross, 1986; Palomba & Banta). Faculty members worried that their academic freedoms would be violated if they were forced by administrators to teach to assessment tests (Cross). However, since assessment techniques are primarily inspection methods that allow identifying discrepancies between expected and actual student performance levels, student learning (rather than academic freedom) should be the issue (Miller). Professors should use assessment information to improve instruction or help students improve their learning (Cross, 1986; 1999). Because assessment facilitates a collection of information on student learning improvements, institutions should want to use assessment systematically to evaluate student growth throughout the college experience (Fincher, 1991).

A mistake that faculty members frequently make is using grades as assessment methods: Student course grades are not appropriate measures of student learning because grades reflect the quantity rather than the quality of learning (Palomba & Banta, 1999; Wolf, 1993). In fact, studying for tests, memorizing information, and taking tests are ordinarily the only skills that students are rewarded with high grades for performing (Boud, 1990). Furthermore, multiple methods of assessment are more valid than a single means of assessment such as the freshman grade point average (Terenzini, 1986). Therefore, faculty and administrators must take care to evaluate student academic growth with valid methods that will provide information for improving instruction and learning rather than invalid methods (Terenzini).

Boud (1990) explained that student outcomes assessment for instructional improvement must be undertaken for the institution's intrinsic satisfaction rather than for satisfying external mandates. Ewell (1999) reported that most institutions implemented student outcomes assessment practices in the 1990s in response to external mandates rather than for intrinsic satisfaction. Ewell explained that budget constraints and institutional resistance, which were less obvious in the 1980s, changed the significance of assessment as a function of higher education management. Additionally, Terenzini (1989/1994) suggested that institutions should want to know if the educational programs and services they provide do adequately develop students, and the institutions should be willing to inspect the differences between expected and actual student outcomes. For institutions wanting to track student outcomes and make improvements, Berquist and Armstrong (1986) suggested that a high quality educational program must first be piloted, reviewed, and refined. That is, piloting the newly implemented or modified program, reviewing operations, and refining operations will enable supporting the assessment of intended student learning outcomes and the improvement of teaching and learning (Berquist & Armstrong).

Developing student learning outcomes requires that faculty members, who will later use the assessment results to make improvements, initially identify the skills, abilities, and attitudes expected from a particular educational experience (Jacobi, Astin, & Ayala, 1987/1994). A systematic assessment program designed to evaluate skills, abilities, and attitudes must utilize various assessment methods such as essays, interviews, portfolios, examinations, and standardized tests (Fincher, 1991). For example, if communication, problem solving, and effective citizenship are important skills to be developed by a particular educational program, then faculty members can determine measurable outcomes related to the skills (Loacker & Mentkowski, 1993). Fincher stressed that all faculty must participate in the creation of measurable outcomes as well as valid and reliable measuring instruments. Specifically, the outcomes must be: (a) meaningful to faculty and students, (b) objective and measurable, and (c) useful for significant teaching and learning improvements (Fincher). Using the expected outcomes of the educational experience, the department or program faculty can establish scales of criteria against which to periodically evaluate various student assignments (Nichols, 1995; Palomba & Banta; Wolf). Kretovics and McCambridge (1999) and Mentkowski (1991/1994) suggested that instructional improvements will be most apparent to faculty members and students, who will recognize the changes in educational programs and appreciate the function of outcomes assessment activities.

If instructional programs and services are not improved, valuable citizens will be scarce (Morris, 1994). Morris explained that professional training and education typically trivializes the ethical development necessary for effective community living. Effective educational programs should prepare students to think ethically, critically, and rationally. Student outcomes assessment is crucial for ensuring the effectiveness of the educational experiences students receive in higher education (Welker & Morgan, 1991). In addition, when instructors portray the work world in academic activities differently than it is, students lose the exercise in making ethical decisions (Boud, 1990). Indeed, employers are not generally aware that technically and professionally trained students lack ethical training (Morris). Gardiner (1994) and Morris recommended instituting an educational experience that properly emphasizes communication skills to prepare students to function effectively in families, communities, and societies. Therefore, an assessment program to support such educational developments is also needed.

Comprehensive Student Outcomes Assessment Program

Assessment is an analytical process of objectively evaluating the institution's educational products (knowledge, skills, attitudes, and behaviors) against established standards to provide information for improving teaching and learning (McLeod & Atwell, 1992; Wolf, 1993). Assessment results usually identify future objectives (Mentkowski, 1991/1994). The assessment of intended and actual outcomes encourages faculty to study whether academic programs challenge students or discourage intellectual development (Bogue & Saunders, 1992). In other words, an inspection of the differences between intended outcomes and actual outcomes should identify opportunities for improving both instruction and learning (Mentkowski & Loacker, 1985). Assessment, which is a quality assurance system distinct from accreditation and program review, total quality management, and accountability, requires an evaluation of higher education inputs, processes, and outputs to ensure quality (Bogue, 1998; Chaffee & Sherr, 1992; Freed et al., 1997; Halpern, 1987b).

Since assessment can refer to an individual instrument, a number of instruments, or a program of instruments administered systematically, Terenzini (1989/1994) suggested defining the intended purpose and use of assessment results before establishing any type of assessment practices or program. Terenzini asserted that defining student outcomes assessment goals at a particular institution unquestionably involves identifying the level (individual or group), the purpose (learning/teaching or accountability), and the object (knowledge, skills, behaviors, and attitudes/values) of assessment. In other words, student learning will only grow when a variety of assessment instruments are used and feedback on performance is provided to students (Chandler, 1986). A diverse identification of levels, purposes, and objects will invariably supply the information needed to design an effective assessment program for students as well as faculty and administrators (Chandler).

Krueger (1993) identified two problems with assessment: (a) it only identifies problems, and (b) it could be used to blame individuals rather than processes for low student academic performance levels. During the early 1980s, administrators and legislators thought assessment would be the course of action by which to improve student grades by controlling faculty performance (Gentemann, Fletcher, & Potter, 1994). However, Astin (1985) noted that many problems with assessment are often related to how the assessment program was established. For instance, faculties typically have concerns about: (a) assessment's strong relationship to accountability, (b) applying management techniques to higher education, and (c) implementing institutional effectiveness principles (Kretovics & McCambridge, 1999; Resnick & Goulden, 1987; Welker and Morgan, 1991). Clarifying the goals of an assessment program before establishing it would alleviate most faculty concerns (Astin).

Ewell (1991/1994) suggested that assessment is as much motivated by societal interests as organizational interests because both societal and organizational parties want to measure educational objectives and document higher education improvements. Deciding the student academic performance improvements that are important to document focuses the assessment program on student learning rather than external interests (Astin, 1985). Yet, by 1993, most established comprehensive student outcomes assessment programs were only about five years old, so the institutional improvements made using assessment results affected few students (Banta, 1993). Nevertheless, stakeholders (students, parents, alumni, and legislators) appreciate and deserve the accountability demonstrated in student outcomes assessment programs (Kretovics & McCambridge; Resnick & Goulden; Welker & Morgan).

Undeniably, assessing the knowledge, skills, abilities, and attitudes of students is a demanding, yet necessary departmental activity that provides systematic documentation of academic program changes over time (Kretovics & McCambridge, 1999; Loacker & Mentkowski, 1993; Magill & Herden, 1998; Miller, 1979; Prus & Johnson, 1994). By the mid-1990s, fewer institutions than expected had instituted comprehensive student outcomes assessment programs (Burke, 1999; Ewell, 1991/1994; Johnson et al., 1991; Morris, 1994). Although assessment proponents claim many benefits of outcomes assessment, no studies have analyzed the value of assessment programs (Ewell). Opponents of assessment claim that quantifying educational objectives and changing instructional techniques will not improve student learning (Bogue & Saunders, 1992). The ability to collect information about student knowledge, skills, abilities, and attitudes is an advantage of outcomes assessment nonetheless (Alexander & Stark, 1986/1994).

In addition, assessment invites a closer examination of educational excellence and how to produce such excellence (Morris, 1994). Gardiner (1994) suggested that higher education management requires continuous systematic and comprehensive improvement, and demonstrating quality improvement using student outcomes assessment demands the assessment of inputs, processes, and outputs (Chaffee & Sherr, 1992; Morris).

Institutional policy decisions concerning students require information generated by student outcomes assessments (Krueger & Heisserer, 1987; Welker & Morgan, 1991; Wolf, 1993). Frequent assessments keep students, faculty, and administrators aware of the instructional and learning progress made at the departmental and institutional levels (Chandler, 1986).

Recently, assessing learning has become more vital for improving courses, curricula, and programs than for admitting students to colleges and universities (Messick, 1999). Assessment is an information gathering and dissemination process that uses goals, criteria, observations, judgments, and feedback to help decision makers improve educational effectiveness and quality (Braskamp, 1991; Mentkowski & Loacker, 1985). Student outcomes assessment programs require academic goals, supportive policies, and appropriate evaluation instruments to track institutional development and mission achievement (Chickering, 1999; Resnick & Goulden, 1987). A comprehensive institutional assessment allows valuable opportunities for assessing student outcomes from multiple perspectives and for describing the institution's impact on students (Fincher, 1991; Loacker & Mentkowski, 1993). Institutions committed to assessing student outcomes must establish data collection and analysis systems to plan, implement, support, and expand institutional assessment activities (Braskamp; Ewell, 1987).

The success and sustainability of a student outcomes assessment program depends primarily on design (Nichols & Wolff, 1990). A well-designed outcomes assessment program provides learning opportunities for assessment supporters as well as students because improvement requires identifying and understanding weaknesses (Read, 1999;

Terenzini, 1989). Halpern (1987a) and Gaither (1996) insisted that carefully planned and coordinated comprehensive student assessment programs consistently inform decision-makers about the value of higher education. While operating an assessment program demonstrates the institution's commitment to systematically assessing student outcomes (Folger & Harris, 1991), Ewell (1993) warned that either faculty may view assessment as merely an administrative exercise for external audiences, or certain institutional groups will not accept the program altogether. Astin (1987) stipulated that the institutional mission must guide the development of the assessment program.

For the institutions accredited by the Southern Association of Colleges and Schools (SACS), the essential planning and evaluation components of outcomes assessment programs are the institutional purpose, expected results, evaluation methods, implementation, and use of evaluation results (Commission on Colleges of the Southern Association of Colleges and Schools, 1998). More than an idea, the design of the outcomes assessment program is the unification of common goals of the institution's members (Burke, 1999; St. Onge, 1999). In fact, strategically planning outcomes assessment programs requires institutions to continuously improve by revising goals, parameters, quality, faculty roles, assessment methods, and uses of results (Diamond, 1998; St. Onge). Employing an assessment coordinator demonstrates the institution's commitment to assessment and provides faculty with the research, planning, and management support to ensure the assessment program's success (Ewell, 1987; Nichols, 1991, 1995).

An effective student outcomes assessment process identifies what students should think, know, and do as a result of an educational experience and identifies the information faculty members need to make improvements (Halpern, 1987b). Faculty leadership and administrative-supported systematic student outcomes assessment programs allow the effective development of instructional and educational support programs (Freed et al., 1997). While educational competencies guide the development of student outcomes, organizational models guide the development of student outcomes assessment programs (Diamond, 1998; St. Onge, 1999). Student outcomes assessment must be a movement and a transformation to succeed with faculty members (Burke, 1999). Faculty members will realize student outcomes assessment benefits if the purpose of assessment is congruent with the methods of assessment (Fincher, 1991; Pratt, 1991; Read, 1999). That is, a useful assessment method is one that provides the appropriate data to resolve student learning questions or problems (Read).

The Commission on Colleges of the Southern Association of Colleges and Schools (1998) required institutions to document institutional effectiveness improvements. Nichols (1995) promoted the use of an Assessment Record Book in which to file academic and administrative program and service improvements. A student outcomes assessment report has much influence over student, curriculum, and faculty development, and any resulting changes in policies, curricula, and actions may occur and be reported later than expected (Magill & Herden, 1998; Nichols, 1991). Outcomes are measurable by more than one method and conform to established standards (Kretovics & McCambridge, 1999; Krueger & Heisserer, 1987; Pratt, 1991). The intended outcomes guide the choice of assessment methods and affect the efficiency of the outcomes assessment program (Gardiner, 1994; Prus & Johnson, 1994).

Although the outcomes assessment methods chosen by faculty members depend on the use of information by the various stakeholder groups, choosing the most appropriate assessment methods is a learning experience that costs time and money (Gardiner, 1994; Kretovics & McCambridge, 1999; Prus & Johnson, 1994). Prus and Johnson cited validity, relevance, and generalizability as attributes of the most appropriate assessment method. Instructional evaluations, observations, standardized tests, theses, portfolios, recitals, completion rates, enrollment patterns, admissions tests, job placement, licensing results, employer interviews, alumni surveys, and transfer student performance are the most commonly used assessment methods at colleges and universities (Commission on Colleges, 1998; Ewell, 1987; Magill & Herden, 1998; Prus & Johnson, 1994). Competency-based assessment instruments are preferable to achievement instruments (Halpern, 1987a), but Astin (1987) explained that using instrument scores alone to determine excellence is risky. The measurement of competencies across students is a possible assessment method (Astin; Gardiner, 1994; Nichols, 1995; Palomba & Banta, 1999). Using multiple and various assessment methods in a structured battery guarantees faculty an accurate representation of outcomes achievement and a valuable information source for decision-making (Halpern; Kameoka & Lister, 1991; Pratt, 1991; Resnick & Goulden, 1987).

As student outcomes assessment became more common in higher education, both supporters and critics began asking for proof of assessment result use (Chaffee & Sherr, 1992). Student outcomes assessment results can be used to identify internal problems, justify internal or external decisions, or control external quality (Kinnick, 1985). In an organized assessment cycle, the intended student outcomes are compared with actual student outcomes, and this comparison influences the appropriate use of assessment results (Nichols, 1995). If the assessment results are consistent with the statement of purpose and applicable to the short and long range plans, the results should be documented in assessment reports and used to improve institutional programs and services (Halpern, 1987a; Pratt, 1991). For example, using assessment results (e.g., student competencies in a particular subject) faculty can improve academic programs (Astin, 1991; Nichols, 1991). Nichols (1991) advised to provide internal and external recognition for the departments using assessment results promptly and appropriately. An inappropriate use of assessment results (Halpern) is making retention or tenure decisions as improving student learning is the impetus of student outcomes assessment.

Prior research has shown that student outcomes assessment methods, coordination, planning, and decisions can influence the advancement of outcomes assessment programs (Astin, 1991). In addition, research demonstrates that these factors are common at many types and sizes of colleges and universities (Banta, 1993). In fact, certain characteristics (best practices) are required to maintain and develop student outcomes assessment programs at American colleges and universities: measurable student development outcomes, multiple assessment methods to fully understand student development, administrative support and faculty leadership, and influence on academic planning and decision-making (Palomba & Banta, 1999). However, without appropriate incentives to use assessment result information, institutions will not be motivated to maintain student outcomes assessment programs (Kinnick, 1985). The challenge for assessment practitioners will be to choose and implement the most suitable information collection and utilization methods for the institution (Kinnick).

Student outcomes assessment best practices. The best practices of student outcomes assessment programs (Appendix C) in the ISSA relate to outcomes of student assessment; student assessment methods; planning and coordinating student assessment; academic planning and review; and academic decision-making (Peterson et al., 1999). Palomba and Banta (1999) described an effective student outcomes assessment program as one that reflects the institution's mission and goals, provides relevant information for making student learning decisions, and allows for program and institutional growth. Outcomes of student assessment such as general education and major field competencies, critical thinking skills, professional abilities, and affective development are important to measure and monitor (Erwin, 1991; Gardiner, 1994; Mentkowski, 1991/1994). Using a variety of assessment methods and thoroughly documenting the assessment process and use of results are characteristics of best practicing outcomes assessment programs (Nichols, 1995; Terenzini, 1989/1994). Common assessment methods for measuring student outcomes are observations, projects, courses, and examinations (Banta, 1993; Erwin, 1991). Johnson et al. (1991) found that the majority of institutions in the Higher Education Panel sample with comprehensive student outcomes assessment programs employed a variety of commercial and local assessment methods.

According to the North Central Association of Colleges and Schools (2000), both progressing and established student outcomes assessment programs maintain an assessment coordinator and committee to guide assessment activities and document program improvements. In addition, academic department heads are charged with assessing student learning using multiple methods, and, with the assistance of assessment committees and coordinators, department heads must use the assessment results to make academic decisions such as modifying missions and goals or instructional techniques (North Central Association of Colleges and Schools). Additionally, institutions committed to student outcomes assessment will educate faculty and administrators on instructional and educational support assessment, and activities using assessment results for planning, decision-making, and improvement will be more apparent (Astin, 1991). Institutions using student outcomes assessment information for curriculum planning and review will realize more revised objectives, modified instructional techniques, and new learning objectives from academic decisions (Barak & Breier, 1990).

The North Central Association of Colleges and Schools Commission on Institutions of Higher Education (2000) noted that institutions demonstrating diverse student outcomes assessment best practices have a tendency to make progress, which eventually promotes continuous improvement, with outcomes assessment programs. Identifying predictors of outcomes assessment best practices such as faculty and administrative decision-making and funding sources (hypotheses one, two, three, and four) by institutional control, Carnegie Classification, regional accrediting agency, and undergraduate enrollment will enable assessment practitioners to establish and maintain productive student outcomes assessment programs at most American colleges and universities. Furthermore, determining differences in student assessment best practices (hypothesis five) by institutional control, Carnegie Classification, regional accrediting agency, and undergraduate enrollment will confirm that certain types of institutions are more likely to have institutionalized outcomes assessment programs than other types of institutions (Palomba & Banta, 1999; Peterson et al., 1999).

Student outcomes assessment experts (Astin, 1991; Nichols, 1995; Banta, 1997) have suggested that outcomes assessment programs will not succeed without faculty leadership, much less support. In fact, a recent study (Schilling & Schilling, 1998) explained that the faculty role in student outcomes assessment should not only be that of planner and coordinator or leader but all three roles at once for full institutionalization and constructive use of outcomes assessment results.

Faculty influence in assessment programs. Although faculty members often have negative opinions about student outcomes assessment activities, most faculty members who are new to assessment do not realize that constructive course, program, and departmental assessments require greater faculty control than administrative control (Burke, 1999; Freed et al., 1997; Gardiner, 1994). Using assessment results to improve curriculum and instruction requires the involvement of prominent faculty members, and the more highly influential faculty members involved, the more effective the student outcomes assessment program will be (Astin, 1991; Nichols, 1995; Palomba & Banta, 1999; Terenzini, 1989/1994; Thomas, 1991/1994). In fact, the more faculty members involved with assessment practices at an institution, the more confident the majority of faculty members will feel about using assessment techniques to inspect and identify opportunities to improve instruction and student learning (Schneider, 1988/1994).

Faculty members must decide the knowledge, skills, aptitudes, and attitudes students will develop from a particular educational program and consistently evaluate the various outcomes of that program to maintain and improve quality (Halpern, 1987a; Magill & Herden, 1998). However, since teaching currently is insignificant compared to research, faculty members often consider lecturing to be teaching and grading to be assessment (Magill & Herden; Morris, 1994). Consequently, if the service component of the mission received as much attention as the research component receives and the teaching component deserves, faculty members would be: (a) aware of the substantial competencies students need to be effective employees as well as societal members and (b) able to identify valid outcomes (Morris). For student outcomes assessment to be successful, faculty members must be in charge of the planning, operating, and controlling of assessment programs (Diamond, 1998; Halpern; Morris). Assessment program quality strongly relates to faculty support of the institutional purpose, mission, and goals (Diamond). In the beginning of the student outcomes assessment movement, faculty members were not fully committed to student outcomes assessment and only participated to meet accreditation requirements (Boud, 1990). Now, institutions committed to the quality improvement of instruction and student learning allow faculty members to control the data and processes of the outcomes assessment program (Astin; Gaither, 1998; Johnson et al., 1991; Nichols, 1995). In addition, early in the assessment movement, institutions believed that having a high quality faculty was advantageous to demonstrate educational quality, but the quality of the faculty cannot replace the quality of the educational experience in reality or on paper (Morris). However, Mentkowski (1991/1994) suggested that faculty members must design outcomes assessment programs to answer faculty questions about educational improvement.

In agreement with assessment experts, Johnson et al. (1991) found that institutions believed increasing faculty decision-making involvement would strengthen a student outcomes assessment program. Consultant-Evaluators of the North Central Association of Colleges and Schools have discovered on accreditation visits to institutions that the expanding student outcomes assessment programs have leadership and support from faculty members who understand the function of assessment, accept responsibility for evaluating student learning, and continuously improve instructional techniques while striving to improve student academic performance (North Central Association of Colleges and Schools Commission on Institutions of Higher Education, 2000). Concerning the institutions accredited by the North Central Association of Colleges and Schools, Lopez (1999) emphasized that an absence of faculty involvement makes establishing an outcomes assessment program very difficult. Identifying the relationships between faculty outcomes assessment involvement and best practices (hypotheses one and four) by institutional control, Carnegie Classification, regional accrediting agency, and undergraduate enrollment will enable assessment practitioners to construct and maintain effective student outcomes assessment programs at most American colleges and universities.

Research indicates that administrative involvement in student outcomes assessment programs is necessary for support, but not for leadership (Astin, 1991; Nichols, 1995; Palomba & Banta, 1999). Commitment to assessment from the chief executive and academic officers, student affairs administrators, institutional researchers, academic evaluation officers, and assessment coordinators support faculty assessment leaders with the information needed for decisions and the leverage needed for improvement (North Central Association of Colleges and Schools Commission on Institutions of Higher Education, 2000).

Administrative influence in assessment programs. Lopez (1999) indicated that faculty and administrative collaboration typically authorizes faculty to implement the changes that assessment identifies and allows administrators to coordinate the routine management aspects of student outcomes assessment. Freed et al. (1997) asserted that complete administrative involvement in student outcomes assessment programs promotes institutionalization of the programs. For example, an effective institutional assessment committee requires a balance of both student affairs administrators and faculty members because the diversity will allow implementing the best decisions for improving student educational experiences (Schuh, 1999).

Student affairs administrators have a role in outcomes assessment as the institutional professionals who support students' extracurricular knowledge, skill, aptitude, and attitude development (Woodard, Hyman, Von Destinon, & Jamison, 1991). Woodard et al. found through a survey of 1,140 chief student affairs officers that 27.2% of responding institutions had student affairs involvement in developing student outcomes assessment programs. Thus, Woodard et al. suggested that as outcomes assessment grows in higher education, student affairs professionals should support the assessment of students and the improvement of educational programs and services.

Nevertheless, the top institutional administrators must only support (not mandate) assessment (Fincher, 1991; St. Onge, 1999). Administrative support involvement in outcomes assessment programs includes demonstrating commitment to outcomes assessment and developing expedient policies and procedures for sustaining assessment programs (Astin, 1991; Freed et al.; Palomba & Banta, 1999). Nichols (1995) considered providing logistical and technical support to be a type of administrative involvement in student outcomes assessment. In student outcomes assessment programs, administrators provide flexible financial, managerial, and organizational support for faculty outcomes assessment leaders, who assess and improve instructional programs and services (Halpern, 1987a; Freed et al., 1997; Palomba & Banta).

However, most of the suggested actions administrators should take in outcomes assessment projects are contrary to administrative orientation. Astin (1987) pointed out that administrators are ordinarily preoccupied with amassing financial resources and distinguished faculty members, so defining institutional excellence and implementing a meaningful student outcomes assessment program are difficult tasks for administrators. Johnson et al. (1991) found that administrative involvement in outcomes assessment commonly involves an administrative assessment officer who provides regular coordination as well as research and development services. This assessment officer, or assessment coordinator, must inspire broad assessment development in the middle of the organization (Nichols, 1991). Furthermore, the other administrators will receive information from student outcomes assessment and institutional effectiveness studies that is useful for making student-related decisions (Kretovics & McCambridge, 1999). Additionally, administrative support of assessment efforts is required to secure faculty commitment (Palomba & Banta, 1999).

Although administrators alone cannot advance student outcomes assessment programs, assessment experts suggest that assessment programs will not survive without administrative influence (Gaither, 1998; Johnson et al., 1991; Nichols, 1991, 1995; Terenzini, 1989/1994). Accreditation visiting teams of the North Central Association of Colleges and Schools Commission on Institutions of Higher Education (2000) have observed that institutions with progressive student outcomes assessment programs have administrators who understand outcomes assessment and want to make institutional changes to improve student learning. Thus, depending on the administration of American student outcomes assessment programs and the use of results in institutional decision-making, the future of higher education student assessment is unclear (Astin, 1991). Subsequently, finding a significant relationship between administrative involvement in outcomes assessment programs and the extent of best practices used in assessment programs (hypotheses two and four) by institutional control, Carnegie Classification, regional accrediting agency, and undergraduate enrollment would prepare assessment coordinators to establish outcomes assessment programs on firm foundations.

Funding sources for assessment programs. Assessment experts have suggested that funding, like administrative involvement, is necessary for institutionalizing student outcomes assessment programs, but funding alone is not sufficient for program success (Astin, 1991; Nichols, 1991; Palomba & Banta, 1999). In fact, sustaining comprehensive student outcomes assessment programs requires not only assessment programs as regular budget items but funds being allocated regularly for training assessment coordinators and faculty assessment leaders (North Central Association of Colleges and Schools Commission on Institutions of Higher Education, 2000). Institutionalizing an outcomes assessment program uses much time and money, and securing some financial commitment from all assessment proponents before implementing an assessment program is a strategy for sustaining the assessment program before it is launched (Nichols, 1991, 1995; Upcraft & Schuh, 1996). Upcraft and Schuh emphasized analyzing the amount of financial resources needed to start and maintain an active and progressive student outcomes assessment program. For justifying the budget of an outcomes assessment program, Terenzini (1989/1994) suggested calculating the various costs to the institution for not establishing an outcomes assessment program. Many sources of funding for student outcomes assessment programs are required because establishing a program costs money, and much time may pass before assessment is a regular budget item (Nichols, 1991, 1995).

Nichols (1991) revealed that external grants or state formulas allocated for advancing assessment have funded most successful student outcomes assessment programs. The Fund for the Improvement of Postsecondary Education (FIPSE) is a common federal funding source for outcomes assessment programs that provides external grants. For instance, an institution may reward an internal grant, which demonstrates institutional commitment to student outcomes assessment, to the department(s) that achieve(s) a certain level of improvement (Palomba & Banta, 1999; Nichols, 1991, 1995). However, since funding typically rewards the most valuable part of the process as opposed to all parts of the process, funding is not the primary component of an assessment program (Krueger, 1993). Johnson et al. (1991) predicted that an institutional interest in quality improvement could protect diverse funding sources and enable subsequent success of student outcomes assessment programs in higher education. Regardless, Nichols (1991) emphasized that assessment must become a regular item in an institution's budget; otherwise, assessment would eventually lose importance. Ascertaining the relationships between the extent of funding support and the best practices in student outcomes assessment programs (hypotheses three and four) for the various institutional control types, Carnegie Classifications, regional accrediting agencies, and undergraduate enrollments will allow assessment leaders to institutionalize programs efficiently.

From the results of this study, the significant relationships between faculty and administrative involvement and funding sources of comprehensive student outcomes assessment programs will enable assessment practitioner to identify existing faculty, administrative, and funding qualities at an institution. Assessment proponents must be aware of the institutional environment into which the student outcomes assessment programs will be implemented so that the programs will fit the organization (Ewell, 1985). In addition, realizing that programs can be configured many ways for effectiveness is important to a new assessment coordinator (Ewell). Additional research on faculty, administrative, and funding qualities will provide assessment practitioners with knowledge for building student outcomes assessment programs on existing frameworks rather than having to use valuable resources to design and construct such frameworks.

CHAPTER 3

METHODOLOGY

Hypotheses were tested using data collected from the ISSA, a survey conducted by the National Center for Postsecondary Improvement. The ISSA asked respondents to rate the levels of institutional support concerning: (a) institutional approach to student assessment; (b) institutional support for student assessment; (c) external influences on institutional student assessment activities; (d) academic management policies and practices for student assessment; and (e) impacts of student assessment. Peterson et al. (1999) intended to clarify and establish the status of student outcomes assessment at American colleges and universities.

Subjects

The survey population of the ISSA included all two- and four-year colleges and universities that are: (a) recognized by the United States Office of Education, (b) controlled publicly or privately, and (c) granting either associate or baccalaureate degrees. Peterson et al. (1999) removed the proprietary and specialized institutions and surveyed the remaining 2,524 public and private non-profit American two- and four-year higher education institutions representing all Carnegie Classifications in 1997. The subjects of this study were the 1,393 (55%) institutions that returned usable responses to the ISSA. Response rates to the ISSA by state, institutional control, Carnegie

Classification, regional accrediting agency, and 1995 undergraduate enrollment comprise Appendix G and Tables 1 – 4, respectively.

Based on institutional control, 63.5 percent of the institutions returning usable survey forms for the NCPI Project 5.2 were public institutions (see Table 1). Private non-profit institutions comprised 36.5 percent of the usable survey forms.

Table 1

ISSA Survey Forms Received by Institutional Control

Institutional Control	ISSA Survey Forms Received	Return Rate
Public	885	63.5
Private non-profit	508	36.5
Total	1393	100.0

Based on Carnegie Classification, 39.34 percent of the institutions returning usable survey forms for the NCPI Project 5.2 were Associate of Arts institutions (see Table 2). Tribal institutions comprised less than one percent of the usable survey forms.

Table 2

ISSA Survey Forms Received by Carnegie Classification

Carnegie Classification	ISSA Survey Forms Received	Return Rate
Research Universities I	52	3.73
Research Universities II	28	2.01
Doctoral Universities I	27	1.94
Doctoral Universities II	38	2.73
Master's Universities and Colleges I	263	18.88
Master's Universities and Colleges II	52	3.73
Baccalaureate I	72	5.17
Baccalaureate II	244	17.52
Associate of Arts	548	39.34
Tribal Colleges	7	0.50
Missing	62	4.45
Total	1393	100.00

Based on regional accrediting agency, 38 percent of the institutions returning usable survey forms for the NCPI Project 5.2 were North Central institutions (see Table 3). Northwest institutions comprised less than six percent of the usable survey forms.

Table 3

ISSA Survey Forms Received by Regional Accrediting Agency

Regional Accrediting Agency	ISSA Survey Forms Received	Return Rate
Middle States	191	13.7
North Central	529	38.0
New England	87	6.2
Northwest	80	5.7
Southern	423	30.4
Western	83	6.0
Total	1393	100.0

Based on 1995 undergraduate enrollment, 21.6 percent of the institutions returning usable survey forms for the NCPI Project 5.2 were in the 1,000 to 2,000 undergraduate enrollment group (see Table 4). Institutions with undergraduate enrollments of less than 1,000 students comprised 13.71 percent of the usable survey forms.

Table 4

ISSA Survey Forms Received by 1995 Undergraduate Enrollment Group

1995 Undergraduate Enrollment Group	ISSA Survey Forms Received	Return Rate
Less than 1,000	191	13.71
1,000 – 2,000	301	21.60
2,000 – 3,000	210	15.10
3,000 – 5,000	202	14.50
5,000 – 10,000	250	17.94
Greater than 10,000	194	13.92
Missing	45	3.23
Total	1393	100.00

Instrument

The ISSA was the first comprehensive national survey of undergraduate student assessment approaches, support patterns, and uses. Following an extensive review of literature and a review of other surveys of institutional assessment, Peterson et al. (1999) drafted an instrument. This instrument was pilot tested with chief academic officers of community colleges, liberal arts colleges, public regional universities, and research universities. After modifications, the final draft of the instrument included 244 items in five sections. In 1997, the entire population of 2,524 public and private institutions, recognized by the United States Office of Education for offering associate and baccalaureate degree programs, was surveyed. The survey process had five steps: (a) a letter was sent to the chief academic officers informing them about the survey; (b) the survey was mailed to the chief academic officers two weeks after the letter; (c) a reminder postcard was mailed one week after the survey; (d) a phone call was placed to the non-responding institutions one month after the survey; and (e) a thank you letter was mailed to the responding institutions two months after the survey. The survey cover letter was addressed personally to the chief academic officer of each institution but requested that the person or group most familiar with the institution's assessment complete the survey. The response rate before the telephone call to non-responding institutions was 19%, and the telephone call precipitated an additional 36% for a final response rate of 55%.

To determine the relationships between the best practices in student outcomes assessment programs, faculty and administrative decision-making involvement, and the variety of funding sources used to improve assessment practices, the researcher constructed four indexes (Appendixes C, D, E, and F) using selected items from the five sections of the ISSA's 244 items designed by Peterson et al. (1999) for NCPI Project 5.2 (Appendix A). The criterion index described the institutional student outcomes assessment best practices. The predictor indexes described the faculty and administrative elements present at the institutions surveyed.

Procedures

The researcher constructed the criterion index and predictor indexes from items that best reflected the necessary qualities endorsed by assessment experts (Astin, 1991; Banta, 1993; and J. O. Nichols, personal communication, July 20, 1999) for establishing enduring comprehensive student outcomes assessment programs. The strengths of the relationships between faculty, administrative, and funding variables and best practices of established comprehensive student outcomes assessment programs were of primary interest in this study.

Best Practices Index. The Best Practices Index (Appendix C) included items selected from each of the five sections of the ISSA (Appendix A): (a) I.A. Type, Extent, and Timing of Student Assessment; (b) I.C. Other Student Assessment Methods; (c) II.E. Planning and Coordinating Student Assessment; (d) IV.H. Academic Planning and Review; and (e) V.A. Decision-making – Institutional Actions (Peterson et al., 1999). For the Best Practices Index, 45 items from these five sections were selected for a maximum score of 173.5. Institutions scoring closer to 173.5 utilized more student outcomes assessment best practices than institutions scoring at lower levels.

Section I.A. of the ISSA (Appendix A) included fourteen items concerning student outcomes. The first nine items instructed respondents to indicate the extent (on a Likert scale from one to four) of student outcomes data collection for currently enrolled students. The last five items of section I.A. asked for the extent of data collection for former students. The Likert items in section I.A. had maximum scores of four, which indicated that student performance data were collected for all current and former students. Additionally, items one through nine had timing dimensions with maximum possible scores of three, so these timing items had to be weighted to be used in the best practices index. With the assistance of an assessment expert, timing items one through nine in section I.A. were weighted according to the importance of data collection for efficiently and effectively operating student outcomes assessment programs (J. O. Nichols, personal communication, March 30, 2000). For example, if a respondent chose a four on the Likert scale and indicated that student data were collected at all three times (entry, while enrolled, and exit) for item number one (student academic intentions or expectations), three points could be added to the Likert score for the item to give a maximum score of seven. However, for items five, six, and seven, the researcher and the assessment expert assigned only one point for the timing (data collected at exit), so the maximum score for items five, six, and seven was five, four from the Likert score plus one from the timing score. The weights assigned to each of the three timing categories for items one through nine in Section I.A. are shown in Table 5.

Table 5

Additional Points Assigned in Weighting Items of Section I.A. for the Best Practices Index

Type	Timing		
Currently Enrolled Students	Entry	Enrolled	Exit
1. Student academic intentions or expectations	1	1	1
2. Basic college-readiness skills	1	0	1
3. Higher-order skills	0	0.5	1
4. General education competencies	0	1	1
5. Competence in major field of study	0	0	1
6. Vocational or professional skills	0	0	1
7. Personal growth and affective development	0	0	1
8. Student experiences and involvement with institution	0	0.5	1
9. Student satisfaction with institution	0	0.5	1

Note. Weightings reflect the assessment expert's judgment of the importance of assessing student outcomes at each stage (on entry, while enrolled, upon exiting). 0 = not important; 0.5 = somewhat important; 1 = very important. Adapted from "Inventory of Institutional Support for Student Assessment" by M. W. Peterson, M. K. Einarson, C. H. Augustine, and D. S. Vaughan, 1999.

Section I.C. of the ISSA (Appendix A) included nine items concerning student outcomes assessment methods. The nine items instructed the respondents to indicate (on a Likert scale of one to four) the extent to which certain student assessment methods were used at the institution. Each of these items had a maximum score of four, which indicated that the student assessment information was used in all institutional academic units.

Section II.E. of the ISSA (Appendix A) included eight items concerning planning and coordinating student assessment activities. The first items had six sub items, and respondents were instructed to check all sub items that applied to their institutional student assessment plans or policies, and items numbered two and eight asked respondents whether or not their institutions had a planning group and an assessment office. The researcher and the assessment expert assigned to each of the eight items a maximum score of one, which was assigned if an item was true for the institution.

Section IV.H. of the ISSA (Appendix A) included four items concerning academic planning and review. The four items instructed respondents to indicate the extent (on a Likert scale of one to five) to which the institution incorporated student outcomes data into planning and review processes. Each of the four items had a maximum score of five. An institution's response received all five points if student outcomes data was incorporated into the planning and review processes of most institutional departments.

Section V.A. of the ISSA (Appendix A) included 10 items concerning the influence of student outcomes assessment data on institutional decision-making actions. The 10 items asked respondents to indicate (on a Likert scale of one to four) the level of institutional action taken using student assessment information. A Likert scale rating of one indicated that no institutional action was taken using assessment information; ratings of two, three, or four indicated that actions were taken and reflected the extent to which the assessment data was influential in initiating action. Each of the 10 items had a maximum score of four, which indicated that action was taken and the data were very influential. The best practices index score was calculated by summing up the institutional scores for the 45 index items.

Index of Faculty Involvement in Student Outcomes Assessment Decision-making. The Index of Faculty Involvement in Student Outcomes Assessment Decision-making (Appendix D) included items from the following two ISSA (Appendix A) sections: (a) II.D. Support for Student Assessment and (b) II.E. Planning and Coordinating Student Assessment (Peterson et al., 1999). For the Index of Faculty Involvement, six items from these two sections were selected for a maximum score of 10. Institutions scoring closer to 10 demonstrated more faculty involvement in student outcomes assessment programs than institutions scoring at lower levels.

Section II.D. of the ISSA (Appendix A) included one item concerning faculty support for student assessment activities. The item instructed respondents to rate (on a Likert scale of one to five) the degree to which the faculty governance body supports student assessment activities. The item had a maximum score of five, which indicated that the faculty governance body was very supportive of student assessment activities.

Section II.E. of the ISSA (Appendix A) included five items concerning faculty involvement in planning and coordinating student assessment. The items asked respondents to indicate (on multiple-response lists) if faculty members have responsibilities for serving on groups, approving policy changes, or operating student assessment activities. Each of these five items had a maximum score of one, which indicated that faculty members were involved in planning and coordinating student assessment activities. A score of zero indicates that faculty members were not involved in planning and coordinating student assessment activities. The Index of Faculty Involvement score was calculated by summing up the institutional scores for the six index items.

Index of Administrative Involvement in Student Outcomes Assessment Decision-making. Like the Index of Faculty Involvement, the Index of Administrative Involvement in Student Outcomes Assessment Decision-making (Appendix E) included items from two ISSA (Appendix A) sections: (a) II.D. Support for Student Assessment and (b) II.E. Planning and Coordinating Student Assessment (Peterson et al., 1999). For the Index of Administrative Involvement, eight items from these two sections were selected for a maximum score of 20. Institutions scoring closer to 20 demonstrated more administrative involvement in student outcomes assessment programs than institutions scoring at lower levels.

Section II.D. of the ISSA (Appendix A) included three items concerning administrative support for student assessment activities. The items instructed respondents to rate (on a Likert scale of one to five) the degree to which chief executive officers, academic affairs administrators, and student affairs administrators supported student assessment activities. Each of these three items had a maximum score of five.

Institutional responses earned five points on each item if they reported that chief executive officers, academic affairs administrators, and student affairs administrators were very supportive of student assessment activities.

Section II.E. of the ISSA (Appendix A) included five items concerning administrative involvement in planning and coordinating student assessment. The items asked respondents to check (on multiple-response lists) if various administrators had responsibilities for serving on groups, approving policy changes, or operating student assessment activities. Each of these five items was assigned a maximum score of one. Responses received one point if they indicated that administrators were responsible for planning and coordinating student assessment activities in each area.

Index of Funding Sources Used to Improve Student Assessment Practices. The Index of Funding Sources Used to Improve Student Assessment Practices (Appendix F) included items from two ISSA (Appendix A) sections: (a) III.C. External Sources of Support for Assessment and (b) IV.A. Resource Allocation for Student Assessment (Peterson et al., 1999). For the Index of Funding Sources, eight items from these two sections were selected for a maximum score of six. Institutions scoring closer to six utilized more funding sources in student outcomes assessment programs than institutions scoring at lower levels.

Section III.C. of the ISSA (Appendix A) included four items concerning external sources of funding to support assessment. The items asked respondents to check (on a multiple-response list) if institutions have received external grants to improve student assessment practices. Each of the four items had a maximum score of one, which indicated that various external funding sources were utilized to sustain student outcomes assessment programs.

Section IV.A. of the ISSA (Appendix A) included four items concerning fiscal resource allocations for student assessment. The items asked respondents to check (on a multiple-response list) if institutions had allocated fiscal resources through operating budgets, student performance indicators, competitive means, or rewards to support student outcomes assessment programs. The first item had a maximum score of one, which indicated that the student outcomes assessment program was funded by an explicit operating budget allocation. For the next three items, the score was one if any of the three survey items were checked or zero if no survey item was checked. Since the items dealt with different yet similar methods of allocating funding, all three items were considered equal, and therefore, having any single allocation method in place in the budget process indicated that a student outcomes assessment program was adequately supported by an institution.

Data Analysis

Pairing each of the Index of Faculty Involvement, the Index of Administrative Involvement, and the Index of Funding Sources (independent variables) with the Best Practices Index (dependent variable), the researcher analyzed the pairs of relationships based on institutional control, Carnegie Classification, regional accrediting agencies, and 1995 undergraduate enrollment using Pearson Product Moment Correlation coefficients and the subsequent coefficients of determination. These analyses were used to test hypotheses one, two, and three. The combined predictive relationship of the Index of Faculty Involvement, the Index of Administrative Involvement, and the Index of Funding Sources to the Best Practices Index was examined using multiple regression analysis, which tested hypothesis four.

Pairing each of the institutional characteristics, including institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment (the independent variables) with the Best Practices Index (the dependent variable), the researcher determined if differences existed between the pairs of independent and dependent variables using ANOVA. These analyses were used to test hypothesis five.

Additional analyses paired each of the institutional characteristics, including institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment (the independent variables), with the Index of Faculty Involvement in Student Outcomes Assessment Decision-making, the Index of Administrative Involvement in Student Outcomes Assessment Decision-making, and the Index of Funding Sources Used to Improve Student Assessment (the dependent variables). In these analyses, the researcher used the ANOVA procedure to determine whether institutions of various types had similar levels of faculty and administrative involvement in student outcomes assessment and had comparable levels of variety in the sources used to fund their student outcomes assessment programs.

All hypotheses were tested with statistical procedures at the .05 level. The Pearson Product Moment Correlation coefficient, the coefficient of determination, multiple regression analysis, and analysis of variance (ANOVA) provided a thorough examination of the relationships and differences between and among the indexes (Gay & Airasian, 2000).

CHAPTER 4

RESULTS

This chapter provides information on values computed to summarize institutions' responses to the Best Practices Index, the Index of Faculty Involvement in Student Outcomes Assessment Decision-making, the Index of Administrative Involvement in Student Outcomes Assessment Decision-making, and the Index of Funding Sources Used to Improve Student Assessment Practices. Results of the data analyses are organized by index and in accordance with the study's five hypotheses. A summary of the descriptive statistics for the responses comprising each of the four indexes is provided in Table 6.

Table 6

Descriptive Statistics for Indexes

Index	M	SD	N
Best Practices in Student Outcomes Assessment	100.33	20.57	1393
Faculty Involvement in Student Outcomes Assessment	5.26	1.80	1389
Administrative Involvement in Student Outcomes Assessment	16.91	3.10	1392
Funding Sources Used to Improve Student Outcomes Assessment	.96	.84	1386

Data Analysis, Hypothesis 1

Hypothesis 1 stated that there is no significant relationship between faculty involvement in decision-making, as measured by an index of faculty involvement in student outcomes assessment decision-making, and the prevailing student assessment "best practices" used at institutions responding to the Inventory of Institutional Support for Student Assessment. The Pearson Product-Moment Correlation analysis was used to determine the strength of the overall relationship between the Index of Faculty Involvement in Student Outcomes Assessment Decision-making and the Best Practices Index. Results of the correlational analysis indicated that the Index of Faculty Involvement and the Best Practices Index were weakly related, $r = .306$, which suggests that approximately nine percent of the variance in the Best Practices Index can be accounted for by the influence of the Index of Faculty Involvement (see Table 7). In addition, the Pearson analysis revealed a significant relationship between the Index of Faculty Involvement and the Best Practices Index, $p < .05$. Therefore, the null hypothesis was rejected.

Table 7

Relationship Between the Index of Faculty Involvement in Student Outcomes Assessment Decision-making and the Best Practices Index

		Best Practices	Faculty Involvement
Best Practices	r	1.000	.306*
	r^2	1.000	.094
	p	--	.000
	N	1393	1389
Faculty Involvement	r	.306*	1.000
	r^2	.094	1.000
	p	.000	--
	N	1389	1389

Note. * Correlation is significant at the .05 level.

The Pearson Product-Moment Correlation analysis was also used to determine the strengths of the relationships between the Index of Faculty Involvement in Student Outcomes Assessment Decision-making and the Best Practices Index by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment (see Table 8). By institutional control, the Index of Faculty Involvement and the Best Practices Index were significantly related, $p = .000$, at both public and private non-profit institutions. This relationship was stronger at private non-profit institutions, $r = .341$, than at public institutions, $r = .266$. In addition, at Tribal institutions, the Index of Faculty Involvement and the Best Practices Index were moderately but not significantly related, $r = .442$, $p = .160$. In the New England accrediting region, the Index of Faculty Involvement and the Best Practices Index were moderately and significantly related, $r = .642$, $p = .000$. At institutions with undergraduate enrollments of less than 1,000 students, the Index of Faculty Involvement and the Best Practices Index were weakly and significantly related, $r = .377$, $p = .000$. Since the majority of subgroup relationships were significant, the results of this analysis also support rejecting the null hypothesis.

Table 8

Relationship Between the Index of Faculty Involvement in Student Outcomes

Assessment Decision-making and the Best Practices Index by Subgroup

Subgroup	r	r^2	p	N
Institutional Control				
Public	.266*	.071	.000	884
Private non-profit	.341*	.116	.000	505
Carnegie Classification				
Research I	.437*	.191	.001	52
Research II	.367*	.135	.027	28
Doctoral I	.276	.076	.082	27
Doctoral II	.334*	.112	.020	38
Master's I	.325*	.106	.000	261
Master's II	.270*	.073	.027	52
Baccalaureate I	.162	.026	.088	72
Baccalaureate II	.370*	.137	.000	243
Associate of Arts	.243*	.059	.000	547
Tribal	.442	.195	.160	7
Regional Accrediting Agency				
Middle States	.263*	.069	.000	190
North Central	.297*	.088	.000	529
New England	.642*	.412	.000	84
Northwest	.387*	.150	.000	80
Southern	.326*	.106	.000	423
Western	.249*	.062	.012	83
1995 Undergraduate Enrollment Group				
< 1,000	.377*	.142	.000	190
1,000 to 2,000	.293*	.086	.000	300
2,000 to 3,000	.282*	.080	.000	210
3,000 to 5,000	.286*	.082	.000	202
5,000 to 10,000	.319*	.102	.000	248
> 10,000	.235*	.055	.000	194

Note. * Correlation is significant at the .05 level.

Data Analysis, Hypothesis 2

Hypothesis 2 stated that there is no significant relationship between administrative involvement in decision-making, as measured by an index of administrative involvement in student outcomes assessment decision-making, and the prevailing student assessment "best practices" used at institutions responding to the Inventory of Institutional Support for Student Assessment. The Pearson Product-Moment Correlation analysis was used to determine the strength of the overall relationship between the Index of Administrative Involvement in Student Outcomes Assessment Decision-making and the Best Practices Index. Results of the correlational analysis indicated that the Index of Administrative Involvement and the Best Practices Index were moderately related, $r = .409$, which suggests that approximately 17 percent of the variance in the Best Practices Index can be accounted for by the influence of the Index of Administrative Involvement (see Table 9). In addition, the Pearson analysis revealed a significant relationship between the Index of Administrative Involvement and the Best Practices Index, $p < .05$. Therefore, the null hypothesis was rejected.

Table 9

Relationship Between the Index of Administrative Involvement in Student Outcomes Assessment Decision-making and the Best Practices Index

		Best Practices	Administrative Involvement
Best Practices	r	1.000	.409*
	r^2	1.000	.167
	p	--	.000
	N	1393	1392
Administrative Involvement	r	.409*	1.000
	r^2	.167	1.000
	p	.000	--
	N	1392	1392

Note. * Correlation is significant at the .05 level.

The Pearson Product-Moment Correlation analysis was also used to determine the strengths of the relationships between the Index of Administrative Involvement in Student Outcomes Assessment Decision-making and the Best Practices Index by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment (see Table 10). By institutional control, the Index of Administrative Involvement and the Best Practices Index were significantly related, $p = .000$, at both public and private non-profit institutions. This relationship was slightly stronger at private non-profit institutions, $r = .420$, than at public institutions, $r = .407$. Additionally, at Tribal institutions, the Index of Administrative Involvement and the Best Practices Index were strongly and significantly related, $r = .820$, $p = .012$. In the Northwest accrediting region, the Index of Administrative Involvement and the Best Practices Index were moderately and significantly related, $r = .518$, $p = .000$. At institutions with undergraduate enrollments of less than 1,000 students, the Index of Administrative Involvement and the Best Practices Index were moderately and significantly related, $r = .522$, $p = .000$. Since the majority of subgroup relationships were significant, the results of this analysis also support rejecting the null hypothesis.

Table 10

Relationship Between the Index of Administrative Involvement in Student Outcomes Assessment Decision-making and the Best Practices Index by Subgroup

Subgroup	r	r^2	p	N
Institutional Control				
Public	.407*	.166	.000	885
Private non-profit	.420*	.176	.000	507
Carnegie Classification				
Research I	.377*	.142	.003	52
Research II	.555*	.308	.001	28
Doctoral I	.151	.023	.226	27
Doctoral II	.307*	.094	.030	38
Master's I	.391*	.153	.000	262
Master's II	.127	.016	.184	52
Baccalaureate I	.596*	.355	.000	72
Baccalaureate II	.431*	.186	.000	244
Associate of Arts	.406*	.165	.000	548
Tribal	.820*	.672	.012	7
Regional Accrediting Agency				
Middle States	.296*	.088	.000	191
North Central	.441*	.194	.000	529
New England	.449*	.202	.000	86
Northwest	.518*	.268	.000	80
Southern	.421*	.177	.000	423
Western	.314*	.099	.002	83
1995 Undergraduate Enrollment Group				
< 1,000	.522*	.272	.000	191
1,000 to 2,000	.431*	.186	.000	300
2,000 to 3,000	.412*	.170	.000	210
3,000 to 5,000	.331*	.110	.000	202
5,000 to 10,000	.447*	.200	.000	250
> 10,000	.326*	.106	.000	194

Note. * Correlation is significant at the .05 level.

Data Analysis, Hypothesis 3

Hypothesis 3 stated that there is no significant relationship between funding sources used to improve student assessment practices, as measured by an index of funding sources, and the prevailing student assessment "best practices" used at institutions responding to the Inventory of Institutional Support for Student Assessment. The Pearson Product-Moment Correlation analysis was used to determine the strength of the overall relationship between the Index of Funding Sources Used to Improve Student Assessment Practices and the Best Practices Index. Results of the correlational analysis indicated that the Index of Funding Sources and the Best Practices Index were weakly related, $\underline{r} = .302$, which suggests that approximately nine percent of the variance in the Best Practices Index can be accounted for by the influence of the Index of Funding Sources (see Table 11). In addition, the Pearson analysis revealed a significant relationship between the Index of Funding Sources and the Best Practices Index, $\underline{p} < .05$. Therefore, the null hypothesis was rejected.

Table 11

Relationship Between the Index of Funding Sources Used to Improve Student Assessment Practices and the Best Practices Index

		Best Practices	Funding Sources
Best Practices	r	1.000	.302*
	r^2	1.000	.091
	p	--	.000
	N	1393	1386
Funding Sources	r	.302*	1.000
	r^2	.091	1.000
	p	.000	--
	N	1386	1386

Note. * Correlation is significant at the .05 level.

The Pearson Product-Moment Correlation analysis was also used to determine the strengths of the relationships between the Index of Funding Sources Used to Improve Student Assessment Practices and the Best Practices Index by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment (see Table 12). By institutional control, the Index of Funding Sources and the Best Practices Index were significantly related, $p = .000$ at both public and private non-profit institutions. This relationship was stronger at private non-profit institutions, $r = .322$, than at public institutions, $r = .307$. In addition, at Doctoral II institutions, the Index of Funding Sources and the Best Practices Index were moderately and significantly related, $r = .533$, $p = .000$. In the Northwest accrediting region, the Index of Funding Sources and the Best Practices Index were weakly but significantly related, $r = .394$, $p = .000$. In addition, at institutions with undergraduate enrollments of 5,000 to 10,000 students, the Index of Funding Sources and the Best Practices Index were weakly but significantly related, $r = .351$, $p = .000$. Since the majority of subgroup relationships were significant, the results of this analysis also support rejecting the null hypothesis.

Table 12

Relationship Between the Index of Funding Sources Used to Improve Student Assessment Practices and the Best Practices Index by Subgroup

Subgroup	r	r^2	p	N
Institutional Control				
Public	.307*	.094	.000	881
Private non-profit	.322*	.104	.000	505
Carnegie Classification				
Research I	.274*	.075	.025	52
Research II	.425*	.181	.012	28
Doctoral I	.363*	.132	.031	27
Doctoral II	.533*	.284	.000	38
Master's I	.355*	.126	.000	262
Master's II	.284*	.081	.022	51
Baccalaureate I	.356*	.127	.001	72
Baccalaureate II	.393*	.154	.000	243
Associate of Arts	.210*	.044	.000	544
Tribal	.497	.247	.128	7
Regional Accrediting Agency				
Middle States	.139*	.019	.028	189
North Central	.338*	.114	.000	529
New England	.383*	.147	.000	86
Northwest	.394*	.155	.000	80
Southern	.328*	.108	.000	421
Western	.208*	.043	.031	81
1995 Undergraduate Enrollment Group				
< 1,000	.347*	.120	.000	190
1,000 to 2,000	.316*	.100	.000	299
2,000 to 3,000	.340*	.116	.000	209
3,000 to 5,000	.275*	.076	.000	201
5,000 to 10,000	.351*	.123	.000	248
> 10,000	.246*	.061	.000	194

Note. * Correlation is significant at the .05 level.

Data Analysis, Hypothesis 4

Hypothesis 4 stated that there is no significant relationship between faculty and administrative decision-making involvement and types of funding used to improve student assessment, as measured by indexes of faculty and administrative involvement and types of funding, and the prevailing student assessment "best practices" used at institutions responding to the Inventory of Institutional Support for Student Assessment by institutional control, Carnegie Classification, regional accrediting agency, or 1995 undergraduate enrollment group. The Index of Faculty Involvement in Student Outcomes Assessment Decision-making, the Index of Administrative Involvement in Student Outcomes Assessment Decision-making, and the Index of Funding Sources Used to Improve Student Assessment Practices were used as the independent, or predictor, variables. The Best Practices Index was used as the dependent, or criterion, variable.

Multiple regression analysis was conducted to determine the combined influence of the Index of Faculty Involvement in Student Outcomes Assessment Decision-making, the Index of Administrative Involvement in Student Outcomes Assessment Decision-making, and the Index of Funding Sources Used to Improve Student Assessment Practices on the Best Practices Index by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment. Results indicated that the Index of Faculty Involvement, the Index of Administrative Involvement, and the Index of Funding Sources were moderately related to the Best Practices Index, $\underline{R} = .472$, $\underline{p} = .000$, which indicates that approximately 22 percent of the variance in the Best Practices Index can be accounted for by the combined influence of the Index of Faculty

Involvement, the Index of Administrative Involvement, and the Index of Funding Sources. In addition, the combination of the Index of Faculty Involvement, the Index of Administrative Involvement, and the Index of Funding Sources is useful in predicting the value of the Best Practices Index, F (3, 1379) = 131.530, p = .000 (see Table 13). Therefore, the null hypothesis was rejected.

Table 13

Regression Analysis ANOVA of Best Practices Predictor Variables

	SS	df	MS	F	p
Regression	128259.722	3	42753.241	131.530	.000
Residual	448236.748	1379	325.045		
Total	576496.470	1382			

The combined relationships of the Best Practices Index with the Index of Faculty Involvement in Student Outcomes Assessment Decision-making, the Index of Administrative Involvement in Student Outcomes Assessment Decision-making, and the Index of Funding Sources Used to Improve Student Assessment Practices by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment were analyzed. The regression analysis results by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment are reported in Tables 10 – 13, respectively.

By institutional control, the predictor variables were most strongly related to the Best Practices Index for private non-profit institutions, R = .497, p = .000. That is, approximately 25 percent of the variability in the private non-profit Best Practices Index was explained by the combined influence of the predictor variables (see Table 14).

Table 14

Regression Analysis by Institutional Control

Institutional Control	R	Adj. R2	SE	F	p
Public	.465	.216	18.033	80.472	.000
Private non-profit	.497	.247	17.554	54.483	.000

By Carnegie Classification, the predictor variables were most strongly and significantly related to the Best Practices Index for Baccalaureate I institutions, R = .638, p = .000. That is, approximately 38 percent of the variability in the Baccalaureate I Best Practices Index was explained by the combined influence of the predictor variables (see Table 15).

Table 15

Regression Analysis by Carnegie Classification

Carnegie Classification	R	Adj. R2	SE	F	p
Research I	.500	.203	19.379	5.324	.003
Research II	.636	.329	14.809	5.422	.005
Doctoral I	.401	.051	17.506	1.466	.250
Doctoral II	.571	.267	15.335	5.495	.003
Master's I	.481	.222	16.880	25.787	.000
Master's II	.385	.094	16.057	2.733	.054
Baccalaureate I	.638	.381	16.347	15.590	.000
Baccalaureate II	.546	.290	17.423	33.767	.000
Associate of Arts	.427	.178	18.950	40.096	.000
Tribal	.841	.416	20.837	2.423	.243

By regional accrediting agency, the predictor variables were most strongly and significantly related to the Best Practices Index for New England institutions, R = .661, p = .000. That is, approximately 42 percent of the variability in the New England Best Practices Index was explained by the combined influence of the predictor variables (see Table 16).

Table 16

Regression Analysis by Regional Accrediting Agency

Accrediting Agency	R	Adj. R2	SE	F	p
Middle States	.323	.090	21.270	7.156	.000
North Central	.523	.269	16.946	65.736	.000
New England	.661	.416	15.190	20.736	.000
Northwest	.605	.341	17.091	14.609	.000
Southern	.501	.246	16.865	46.642	.000
Western	.345	.085	17.810	3.479	.020

By 1995 undergraduate enrollment, the predictor variables were most strongly and significantly related to the Best Practices Index for institutions with undergraduate enrollments of less than 1,000 students, R = .604, p = .000. That is, approximately 35 percent of the variability in the Less than 1,000 Best Practices Index was explained by the combined influence of the predictor variables (see Table 17). Since the results of this analysis indicated that the independent and dependent variables were significantly related, the null hypothesis was rejected.

Table 17

Regression Analysis by 1995 Undergraduate Enrollment Group

Enrollment Group	R	Adj. R2	SE	F	p
Less than 1,000	.604	.354	18.432	35.403	.000
1,000 to 2,000	.490	.232	17.677	30.997	.000
2,000 to 3,000	.501	.240	16.697	22.893	.000
3,000 to 5,000	.394	.142	20.401	12.064	.000
5,000 to 10,000	.505	.246	16.353	27.685	.000
Greater than 10,000	.385	.135	18.337	11.002	.000

Data Analysis, Hypothesis 5

Hypothesis 5 stated that there are no significant differences in the prevailing "best practices" used at institutions responding to the Inventory of Institutional Support for Student Assessment by institutional control, Carnegie Classification, regional accrediting agency, or 1995 undergraduate enrollment group. Analysis of variance (ANOVA) was used to determine if differences existed between or among group means on the Best Practices Index at public and private non-profit institutions and within the 10 Carnegie

Classifications, the six regional accrediting agencies, and the six 1995 undergraduate enrollment groups. An alpha level of .05 was used for all statistical tests.

Best Practices Index means and standard deviations for public and private non-profit institutions are shown in Table 18. Since it appeared that the Best Practices Index means based on institutional control were different, a one-way ANOVA was used to identify a significant difference.

Table 18

Descriptive Statistics for Best Practices Index by Institutional Control

Institutional Control	N	M	SD
Public	885	98.438	20.388
Private non-profit	508	103.613	20.498
Total	1393	100.325	20.572

The results of a one-way ANOVA comparing Best Practices Index means from public and private non-profit institutions are reported in Table 19. Results of the ANOVA indicated that a significant difference existed between the Best Practices Index means based on institutional control. This analysis showed that the Best Practices Index mean for private non-profit institutions ($M = 103.613$, $SD = 20.498$) was significantly higher than the Best Practices Index mean for public institutions ($M = 98.438$, $SD = 20.388$), $F(1, 1391) = 20.715$, $p = .000$.

Table 19

ANOVA Comparing Means on the Best Practices Index for Groups of Institutions Based on Institutional Control

Source	SS	df	MS	F	p
Between Groups	8644.362	1	8644.362	20.715	.000
Within Groups	580464.824	1391	417.300		
Total	589109.186	1392			

Best Practices Index means and standard deviations for Carnegie Classifications are shown in Table 20. The Best Practices Index means based on Carnegie Classification ranged from 90.857 to 105.348, so a one-way ANOVA was used to identify significant differences.

Table 20

Descriptive Statistics for Best Practices Index by Carnegie Classification

Carnegie Classification	N	M	SD
Research I	52	92.837	21.704
Research II	28	95.929	18.085
Doctoral I	27	95.259	17.970
Doctoral II	38	101.263	17.913
Master's I	263	103.759	19.591
Master's II	52	100.731	16.707
Baccalaureate I	72	100.201	20.783
Baccalaureate II	244	105.348	20.952
Associate of Arts	548	97.676	20.977
Tribal	7	90.857	27.261
Total	1331	100.332	20.671

The results of a one-way ANOVA comparing Best Practices Index means from Research I and II, Doctoral I and II, Master's I and II, Baccalaureate I and II, Associate of Arts, and Tribal institutions are reported in Table 21. Results of the ANOVA indicated that significant differences existed among the Best Practices Index means based on Carnegie Classification. This analysis showed that the Best Practices Index mean for Baccalaureate II institutions (M = 105.348, SD = 20.952) was significantly higher than the Best Practices Index mean for Research I institutions (M = 92.837, SD = 21.704), F (9, 1321) = 4.780, p = .000. Also, the Best Practices Index mean for Master's I institutions (M = 103.759, SD = 19.591) was significantly higher than the Best Practices Index mean for Research I institutions (M = 92.837, SD = 21.704). Since the ANOVA identified significant differences in Best Practices Index means based on Carnegie Classification, a Tukey's honestly significant difference test was used to identify the pairs of means that differed significantly.

Table 21

ANOVA Comparing Means on the Best Practices Index for Groups of Institutions Based on Carnegie Classification

	SS	df	MS	F	p
Between Groups	17923.467	9	1991.496	4.780	.000
Within Groups	550396.254	1321	416.651		
Total	568319.720	1330			

A post hoc analysis using Tukey's honestly significant difference test identified four pairs of Best Practices Index means based on Carnegie Classification that differed significantly (see Table 22). The Best Practices Index means for Master's I and Baccalaureate II institutions were significantly higher than the Best Practices Index means for Research I and Associate of Arts institutions.

Table 22

Results of Tukey's Honestly Significant Difference Test for Comparing Best Practices Index Carnegie Classification Means (Pairs for Which Differences Were Significant)

Mean 1	Mean 2	Mean Difference	p
Research I	Master's I	-10.922	.015
Research I	Baccalaureate II	-12.512	.002
Master's I	Associate of Arts	6.083	.003
Baccalaureate II	Associate of Arts	7.672	.000

Best Practices Index means and standard deviations for regional accrediting agencies are shown in Table 23. The Best Practices Index means based on regional accrediting agency ranged from 88.946 to 104.694, so a one-way ANOVA was used to identify significant differences.

Table 23

Descriptive Statistics for Best Practices Index by Regional Accrediting Agency

Agency	N	M	SD
Middle States	191	98.105	22.304
North Central	529	101.059	19.819
New England	87	92.851	21.227
Northwest	80	97.613	21.050
Southern	423	104.694	19.465
Western	83	88.946	18.496
Total	1393	100.325	20.572

The results of a one-way ANOVA comparing Best Practices Index means from Middle States, North Central, New England, Northwest, Southern, and Western institutions are reported in Table 24. Results of the ANOVA indicated that significant differences existed among the Best Practices Index means based on regional accrediting agency. This analysis showed that the Best Practices Index mean for Southern institutions (M = 104.694, SD = 19.465) was significantly higher than the Best Practices Index mean for Western institutions (M = 88.946, SD = 18.496), F (5, 1387) = 12.549, p = .000. In addition, the Best Practices Index mean for North Central institutions (M = 101.059, SD = 19.819) was significantly higher than the Best Practices Index mean for New England institutions (M = 92.851, SD = 21.227). Since the ANOVA identified significant differences in Best Practices Index means based on regional accrediting agency, a

Tukey's honestly significant difference test was used to identify the pairs of means that differed significantly.

Table 24

ANOVA Comparing Means on the Best Practices Index for Groups of Institutions Based on Regional Accrediting Agency

Source	SS	df	MS	F	p
Between Groups	25496.441	5	5099.288	12.549	.000
Within Groups	563612.744	1387	406.354		
Total	589109.186	1392			

A post hoc analysis using Tukey's honestly significant difference test identified seven pairs of Best Practices Index means based on regional accrediting agency that differed significantly (see Table 25). The Best Practices Index means for Southern, Middle States, and North Central institutions were significantly higher than the Best Practices Index means for the other regional accrediting agency institutions.

Table 25

Results of Tukey's Honestly Significant Difference Test for Comparing Best Practices Index Regional Accrediting Agency Means (Pairs for Which Differences Were Significant)

Mean 1	Mean 2	Mean Difference	p
Middle States	Southern	-6.589	.002
Middle States	Western	9.159	.007
North Central	New England	8.208	.006
North Central	Western	12.113	.000
New England	Southern	-11.843	.000
Northwest	Southern	-7.081	.046
Southern	Western	15.748	.000

Best Practices Index means and standard deviations for 1995 undergraduate enrollment groups are shown in Table 26. The Best Practices Index means based on 1995 undergraduate enrollment ranged from 95.688 to 103.333, so a one-way ANOVA was used to identify significant differences.

Table 26

Descriptive Statistics for Best Practices Index by 1995 Undergraduate Enrollment Group

Enrollment Group	N	M	SD
Less than 1,000	191	103.333	23.064
1,000 to 2,000	301	101.924	20.490
2,000 to 3,000	210	100.221	19.119
3,000 to 5,000	202	101.651	21.985
5,000 to 10,000	250	99.302	19.282
Greater than 10,000	194	95.688	19.711
Total	1348	100.434	20.668

The results of a one-way ANOVA comparing Best Practices Index means from institutions with 1995 undergraduate enrollments of: (a) less than 1,000, (b) 1,000 to 2,000, (c) 2,000 to 3,000, (d) 3,000 to 5,000, (e) 5,000 to 10,000, and (f) greater than 10,000 are reported in Table 27. Results of the ANOVA indicated that significant differences existed among the Best Practices Index means based on 1995 undergraduate enrollment. This analysis showed that the Best Practices Index mean for institutions with undergraduate enrollments of less than 1,000 students (M = 103.333, SD = 23.064) was significantly higher than the Best Practices Index mean for institutions with undergraduate enrollments of greater than 10,000 students (M = 95.688, SD = 19.711), F (5, 1342) = 3.435, p = .004. Also, the Best Practices Index mean for institutions with undergraduate enrollments of 1,000 to 2,000 students (M = 101.924, SD = 20.490) was significantly higher than the Best Practices Index mean for institutions with undergraduate enrollments of greater than 10,000 students (M = 95.688, SD = 19.711). Since the ANOVA identified significant differences in Best Practices Index means based on 1995 undergraduate enrollment, a Tukey's honestly significant difference test was used to identify the pairs of means that differed significantly.

Table 27

ANOVA Comparing Means on the Best Practices Index for Groups of Institutions Based on 1995 Undergraduate Enrollment Group

Source	SS	df	MS	F	p
Between Groups	7270.996	5	1454.199	3.435	.004
Within Groups	568128.311	1342	423.344		
Total	575399.308	1347			

A post hoc analysis using Tukey's honestly significant difference test identified three pairs of Best Practices Index means based on 1995 undergraduate enrollment that differed significantly (see Table 28). The Best Practices Index mean for institutions with undergraduate enrollments of greater than 10,000 students was significantly lower than the Best Practices Index means for three of the smaller enrollment groups.

Table 28

Results of Tukey's Honestly Significant Difference Test for Comparing Best Practices Index 1995 Undergraduate Enrollment Group Means (Pairs for Which Differences Were Significant)

Mean 1	Mean 2	Mean Difference	p
Less than 1,000	Greater than 10,000	7.644	.004
1,000 to 2,000	Greater than 10,000	6.235	.013
3,000 to 5,000	Greater than 10,000	5.963	.045

Additional Analysis, Index of Faculty Involvement

In addition to the statistical analyses for the hypotheses, ANOVAs were conducted for the Index of Faculty Involvement in Student Outcomes Assessment Decision-making. The ANOVAs were used to determine if differences existed between or among faculty involvement by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment group. An alpha level of .05 was used for all statistical calculations.

Index of Faculty Involvement in Student Outcomes Assessment Decision-making means and standard deviations for public and private non-profit institutions are shown in Table 29. Since it appeared that the Index of Faculty Involvement means based on institutional control were different, a one-way ANOVA was used to identify a significant difference.

Table 29

Descriptive Statistics for Index of Faculty Involvement by Institutional Control

Institutional Control	N	M	SD
Public	884	5.055	1.798
Private non-profit	505	5.626	1.737
Total	1389	5.263	1.797

The results of a one-way ANOVA comparing Index of Faculty Involvement in Student Outcomes Assessment Decision-making means from public and private non-profit institutions are reported in Table 30. Results of the ANOVA indicated that a significant difference existed between the Index of Faculty Involvement means based on institutional control. This analysis showed that the Index of Faculty Involvement mean for private non-profit institutions (M = 5.626, SD = 1.737) was significantly higher than the Index of Faculty Involvement mean for public institutions (M = 5.055, SD = 1.798), F (1, 1387) = 33.114, p = .000.

Table 30

ANOVA Comparing Means on the Index of Faculty Involvement for Groups of Institutions Based on Institutional Control

Source	SS	df	MS	F	p
Between	104.536	1	104.536	33.114	.000
Within	4378.549	1387	3.157		
Total	4483.086	1388			

Index of Faculty Involvement in Student Outcomes Assessment Decision-making means and standard deviations for Carnegie Classifications are shown in Table 31. The Index of Faculty Involvement means based on Carnegie Classification ranged from 3.789 to 5.789, so a one-way ANOVA was used to identify significant differences.

Table 31

Descriptive Statistics for Index of Faculty Involvement by Carnegie Classification

Carnegie Classification	N	M	SD
Research I	52	3.789	1.550
Research II	28	4.071	1.653
Doctoral I	27	4.815	1.468
Doctoral II	38	5.263	1.655
Master's I	261	5.513	1.726
Master's II	52	5.789	1.741
Baccalaureate I	72	5.278	1.721
Baccalaureate II	243	5.687	1.613
Associate of Arts	547	5.135	1.807
Tribal	7	5.143	2.544
Total	1327	5.266	1.777

The results of a one-way ANOVA comparing Index of Faculty Involvement in Student Outcomes Assessment Decision-making means from Research I and II, Doctoral I and II, Master's I and II, Baccalaureate I and II, Associate of Arts, and Tribal institutions are reported in Table 32. Results of the ANOVA indicated that significant differences existed among the Index of Faculty Involvement means based on Carnegie Classification. This analysis showed that the Index of Faculty Involvement mean for Research I institutions (M = 3.789, SD = 1.550) was significantly lower than the Index of Faculty Involvement mean for Master's II institutions, (M = 5.789, SD = 1.741), F (9, 1317) = 8.961, p = .000. Also, the Index of Faculty Involvement mean for Research II institutions (M = 4.071, SD = 1.653) was significantly lower than the Index of Faculty Involvement mean for Master's II institutions (M = 5.789, SD = 1.741). Since the ANOVA identified significant differences in Index of Faculty Involvement means based on Carnegie Classification, a Tukey's honestly significant difference test was used to identify the pairs of means that differed significantly.

Table 32

ANOVA Comparing Means on the Index of Faculty Involvement for Groups of Institutions Based on Carnegie Classification

Source	SS	df	MS	F	p
Between	241.727	9	26.859	8.961	.000
Within	3947.370	1317	2.997		
Total	4189.097	1326			

A post hoc analysis using Tukey's honestly significant difference test identified 11 pairs of Index of Faculty Involvement in Student Outcomes Assessment Decision-making means based on Carnegie Classification that differed significantly (see Table 33). The Index of Faculty Involvement means for Research I and Research II institutions were significantly lower than the Index of Faculty Involvement means for other Carnegie institutions.

Table 33

Results of Tukey's Honestly Significant Difference Test for Comparing Index of Faculty Involvement Carnegie Classifcation Means (Pairs for Which Differences Were Significant)

Mean 1	Mean 2	Mean Difference	p
Research I	Doctoral II	-1.475	.003
Research I	Master's I	-1.725	.000
Research I	Master's II	-2.000	.000
Research I	Baccalaureate I	-1.489	.000
Research I	Baccalaureate II	-1.899	.000
Research I	Associate of Arts	-1.347	.000
Research II	Master's I	-1.442	.001
Research II	Master's II	-1.717	.001
Research II	Baccalaureate II	-1.616	.000
Research II	Associate of Arts	-1.064	.049
Baccalaureate II	Associate of Arts	.552	.001

Index of Faculty Involvement in Student Outcomes Assessment Decision-making means and standard deviations for regional accrediting agencies are shown in Table 34. The Index of Faculty Involvement means based on regional accrediting agency ranged from 4.771 to 5.815, so a one-way ANOVA was used to identify significant differences.

Table 34

Descriptive Statistics for Index of Faculty Involvement by Regional Accrediting Agency

Accrediting Agency	N	M	SD
Middle States	190	5.142	1.879
North Central	529	5.815	1.688
New England	84	5.000	1.650
Northwest	80	5.088	1.715
Southern	423	4.809	1.756
Western	83	4.771	1.823
Total	1389	5.263	1.797

The results of a one-way ANOVA comparing Index of Faculty Involvement in Student Outcomes Assessment Decision-making means from Middle States, North Central, New England, Northwest, Southern, and Western institutions are reported in Table 35. Results of the ANOVA indicated that significant differences existed among the Index of Faculty Involvement means based on regional accrediting agency. This analysis showed that the Index of Faculty Involvement mean for North Central institutions

(M = 5.815, SD = 1.688) was significantly higher than the Index of Faculty Involvement mean for Western institutions (M = 4.771, SD = 1.823), F (5, 1383) = 18.395, p = .000. Also, the Index of Faculty Involvement mean for North Central institutions (M = 5.815, SD = 1.688) was significantly higher than the Index of Faculty Involvement mean for Southern institutions (M = 4.809, SD = 1.756). Since the ANOVA identified significant differences in Index of Faculty Involvement means based on regional accrediting agency, a Tukey's honestly significant difference test was used to identify the pairs of means that differed significantly.

Table 35

ANOVA Comparing Means on the Index of Faculty Involvement for Groups of Institutions Based on Regional Accrediting Agency

Source	SS	df	MS	F	p
Between	279.550	5	55.910	18.395	.000
Within	4203.536	1383	3.039		
Total	4483.086	1388			

A post hoc analysis using Tukey's honestly significant difference test identified five pairs of Index of Faculty Involvement in Student Outcomes Assessment Decision-making means based on regional accrediting agency that differed significantly (see Table 36). The Index of Faculty Involvement means for North Central institutions were significantly higher than the Index of Faculty Involvement means for the other regional accrediting agency institutions.

Table 36

Results of Tukey's Honestly Significant Difference Test for Comparing Index of Faculty Involvement Regional Accrediting Agency Means (Pairs for Which Differences Were Significant)

Mean 1	Mean 2	Mean Difference	p
Middle States	North Central	-.673	.000
North Central	New England	.815	.001
North Central	Northwest	.727	.007
North Central	Southern	1.006	.000
North Central	Western	1.044	.000

Index of Faculty Involvement in Student Outcomes Assessment Decision-making means and standard deviations for 1995 undergraduate enrollment groups are shown in Table 37. The Index of Faculty Involvement means based on 1995 undergraduate enrollment ranged from 4.814 to 5.647, so a one-way ANOVA was used to identify significant differences.

Table 37

Descriptive Statistics for Index of Faculty Involvement by 1995 Undergraduate Enrollment Group

Enrollment Group	N	M	SD
Less than 1,000	190	5.647	1.778
1,000 to 2,000	300	5.380	1.760
2,000 to 3,000	210	5.329	1.652
3,000 to 5,000	202	5.277	1.782
5,000 to 10,000	248	5.202	1.804
Greater than 10,000	194	4.814	1.882
Total	1344	5.280	1.788

The results of a one-way ANOVA comparing Index of Faculty Involvement in Student Outcomes Assessment Decision-making means from institutions with 1995 undergraduate enrollments of: (a) less than 1,000, (b) 1,000 to 2,000, (c) 2,000 to 3,000, (d) 3,000 to 5,000, (e) 5,000 to 10,000, and (f) greater than 10,000 are reported in Table 38. Results of the ANOVA indicated that significant differences existed among the Index of Faculty Involvement means based on 1995 undergraduate enrollment. This analysis showed that the Index of Faculty Involvement mean for institutions with undergraduate enrollments of less than 1,000 students (M = 5.647, SD = 1.778) was significantly higher than the Index of Faculty Involvement mean for institutions with undergraduate enrollments of greater than 10,000 students (M = 4.814, SD = 1.882), F (5, 1338) = 4.611, p = .000. Also, the Index of Faculty Involvement mean for institutions with undergraduate enrollments of 1,000 to 2,000 students (M = 5.380, SD = 1.760) was significantly higher than the Index of Faculty Involvement mean for institutions with undergraduate enrollments of greater than 10,000 students (M = 4.814, SD = 1.882). Since the ANOVA identified significant differences in Index of Faculty Involvement means based on 1995 undergraduate enrollment, a Tukey's honestly significant difference test was used to identify the pairs of means that differed significantly.

Table 38

ANOVA Comparing Means on the Index of Faculty Involvement for Groups of Institutions Based on 1995 Undergraduate Enrollment Group

Source	SS	df	MS	F	p
Between	72.713	5	14.543	4.611	.000
Within	4220.096	1338	3.154		
Total	4292.810	1343			

A post hoc analysis using Tukey's honestly significant difference test identified three pairs of Index of Faculty Involvement in Student Outcomes Assessment Decision-making means based on 1995 undergraduate enrollment that differed significantly (see Table 39). The Index of Faculty Involvement mean for institutions with undergraduate enrollments of greater than 10,000 students was significantly lower than the Index of Faculty Involvement means for the three smallest enrollment groups.

Table 39

Results of Tukey's Honestly Significant Difference Test for Comparing Index of Faculty Involvement 1995 Undergraduate Enrollment Group Means (Pairs for Which Differences Were Significant)

Mean 1	Mean 2	Mean Difference	p
Less than 1,000	Greater than 10,000	.833	.000
1,000 to 2,000	Greater than 10,000	.566	.007
2,000 to 3,000	Greater than 10,000	.514	.042

Additional Analysis, Index of Administrative Involvement

In addition to the statistical analyses for the hypotheses, ANOVAs were conducted for the Index of Administrative Involvement in Student Outcomes Assessment Decision-making. The ANOVAs were used to determine if differences existed between or among administrative involvement by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment group. An alpha level of .05 was used for all statistical calculations.

Index of Administrative Involvement in Student Outcomes Assessment Decision-making means and standard deviations for public and private non-profit institutions are shown in Table 40. Since it appeared that the Index of Administrative Involvement means based on institutional control were different, a one-way ANOVA was used to identify a significant difference.

Table 40

Descriptive Statistics for Index of Administrative Involvement by Institutional Control Response

Institutional Control	N	M	SD
Public	885	16.908	3.124
Private non-profit	507	16.899	3.059
Total	1392	16.905	3.099

The results of a one-way ANOVA comparing Index of Administrative Involvement in Student Outcomes Assessment Decision-making means from public and private non-profit institutions are reported in Table 41. Results of the ANOVA indicated that a significant difference existed between the Index of Administrative Involvement means based on institutional control. This analysis showed that the Index of Administrative Involvement mean for public institutions (M = 16.908, SD = 3.124) was not significantly different from the Index of Administrative Involvement mean for private non-profit institutions (M = 16.899, SD = 3.059), F (1, 1390) = .003, p = .958.

Table 41

ANOVA Comparing Means on the Index of Administrative Involvement for Groups of Institutions Based on Institutional Control

Source	SS	df	MS	F	p
Between	2.650E-02	1	2.650E-02	.003	.958
Within	13361.456	1390	9.613		
Total	13361.483	1391			

Index of Administrative Involvement in Student Outcomes Assessment Decision-making means and standard deviations for Carnegie Classifications are shown in Table 42. The Index of Administrative Involvement means based on Carnegie Classification ranged from 14.558 to 17.336, so a one-way ANOVA was used to identify significant differences.

Table 42

Descriptive Statistics for Index of Administrative Involvement by Carnegie Classification

Carnegie Classification	N	M	SD
Research I	52	14.558	3.992
Research II	28	16.571	3.237
Doctoral I	27	16.630	2.420
Doctoral II	38	16.526	3.020
Master's I	262	16.981	2.666
Master's II	52	17.019	2.941
Baccalaureate I	72	16.292	3.060
Baccalaureate II	244	17.336	2.714
Associate of Arts	548	17.073	3.245
Tribal	7	15.000	5.802
Total	1330	16.914	3.093

The results of a one-way ANOVA comparing Index of Administrative Involvement in Student Outcomes Assessment Decision-making means from Research I and II, Doctoral I and II, Master's I and II, Baccalaureate I and II, Associate of Arts, and Tribal institutions are reported in Table 43. Results of the ANOVA indicated that significant differences existed among the Index of Administrative Involvement means based on Carnegie Classification. This analysis showed that the Index of Administrative Involvement mean for Research I institutions ($\underline{M}$ = 14.558, $\underline{SD}$ = 3.992) was significantly lower than the Index of Administrative Involvement mean for Baccalaureate II institutions ($\underline{M}$ = 17.336, $\underline{SD}$ = 2.714), $\underline{F}$ (9, 1320) = 4.919, $\underline{p}$ = .000. In addition, the Index of Administrative Involvement mean for Research I institutions ($\underline{M}$ = 14.558, $\underline{SD}$ = 3.992) was significantly lower than the Index of Administrative Involvement mean for Associate of Arts institutions ($\underline{M}$ = 17.073, $\underline{SD}$ = 3.245). Since the ANOVA identified significant differences in Index of Administrative Involvement means based on Carnegie Classification, a Tukey's honestly significant difference test was used to identify the pairs of means that differed significantly.

Table 43

ANOVA Comparing Means on the Index of Administrative Involvement for Groups of Institutions Based on Carnegie Classification

Source	SS	df	MS	F	p
Between	412.491	9	45.832	4.919	.000
Within	12297.737	1320	9.316		
Total	12710.229	1329			

A post hoc analysis using Tukey's honestly significant difference test identified four pairs of Index of Administrative Involvement in Student Outcomes Assessment Decision-making means based on Carnegie Classification that differed significantly (see Table 44). The Index of Administrative Involvement means for Research I were significantly lower than the Index of Administrative Involvement means for Master's I, Master's II, Baccalaureate II, and Associate of Arts institutions.

Table 44

Results of Tukey's Honestly Significant Difference Test for Comparing Index of Administrative Involvement Carnegie Classifcation Means (Pairs for Which Differences Were Significant)

Mean 1	Mean 2	Mean Difference	p
Research I	Master's I	-2.423	.000
Research I	Master's II	-2.462	.002
Research I	Baccalaureate II	-2.778	.000
Research I	Associate of Arts	-2.515	.000

Index of Administrative Involvement in Student Outcomes Assessment Decision-making means and standard deviations for regional accrediting agencies are shown in Table 45. The Index of Administrative Involvement means based on regional accrediting agency ranged from 15.711 to 17.268, so a one-way ANOVA was used to identify significant differences.

Table 45

Descriptive Statistics for Index of Administrative Involvement by Regional Accrediting Agency

Accrediting Agency	N	M	SD
Middle States	191	16.492	3.727
North Central	529	17.268	2.646
New England	86	15.965	3.334
Northwest	80	17.263	2.504
Southern	423	16.995	2.995
Western	83	15.711	4.261
Total	1392	16.905	3.099

The results of a one-way ANOVA comparing Index of Administrative Involvement in Student Outcomes Assessment Decision-making means from Middle States, North Central, New England, Northwest, Southern, and Western institutions are reported in Table 46. Results of the ANOVA indicated that significant differences existed among the Index of Administrative Involvement means based on regional accrediting agency. This analysis showed that the Index of Administrative Involvement mean for North Central institutions (M = 17.268, SD = 2.646) was significantly higher than the Index of Administrative Involvement mean for Western institutions (M = 15.711, SD = 4.261), F (5, 1386) = 6.593, p = .000. Also, the Index of Administrative Involvement mean for Northwest institutions (M = 17.263, SD = 2.504) was significantly higher than the Index of Administrative Involvement mean for Western institutions (M = 15.711, SD = 4.261). Since the ANOVA identified significant differences in Index of Administrative Involvement means based on regional accrediting agency, a Tukey's honestly significant difference test was used to identify the pairs of means that differed significantly.

Table 46

ANOVA Comparing Means on the Index of Administrative Involvement for Groups of Institutions Based on Regional Accrediting Agency

Source	SS	df	MS	F	p
Between	310.428	5	62.086	6.593	.000
Within	13051.055	1386	9.416		
Total	13361.483	1391			

A post hoc analysis using Tukey's honestly significant difference test identified five pairs of Index of Administrative Involvement in Student Outcomes Assessment Decision-making means that differed significantly (see Table 47). The Index of Administrative Involvement mean for North Central institutions was significantly higher than Index of Administrative Involvement means for three of the five other regional accrediting agency institutions.

Table 47

Results of Tukey's Honestly Significant Difference Test for Comparing Index of Administrative Involvement Regional Accrediting Agency Means (Pairs for Which Differences Were Significant)

Mean 1	Mean 2	Mean Difference	p
Middle States	North Central	-.776	.033
North Central	New England	1.303	.004
North Central	Western	1.558	.000
Northwest	Western	1.552	.016
Southern	Western	1.284	.007

Index of Administrative Involvement in Student Outcomes Assessment Decision-making means and standard deviations for 1995 undergraduate enrollment groups are shown in Table 48. The Index of Administrative Involvement means based on 1995 undergraduate enrollment ranged from 16.325 to 17.286, so a one-way ANOVA was used to identify significant differences.

Table 48

Descriptive Statistics for Index of Administrative Involvement by 1995 Undergraduate Enrollment Group

Enrollment Group	N	M	SD
Less than 1,000	191	17.246	3.170
1,000 to 2,000	300	16.903	2.926
2,000 to 3,000	210	17.286	2.557
3,000 to 5,000	202	16.837	3.439
5,000 to 10,000	250	16.944	2.762
Greater than 10,000	194	16.325	3.624
Total	1347	16.926	3.080

The results of a one-way ANOVA comparing Index of Administrative Involvement in Student Outcomes Assessment Decision-making means from institutions with 1995 undergraduate enrollments of: (a) less than 1,000, (b) 1,000 to 2,000, (c) 2,000 to 3,000, (d) 3,000 to 5,000, (e) 5,000 to 10,000, and (f) greater than 10,000 are reported in Table 49. Results of the ANOVA indicated that the Index of Administrative Involvement mean for institutions with undergraduate enrollments of less than 1,000 students (M = 17.246, SD = 3.170) was significantly higher than the Index of Administrative Involvement mean for institutions with undergraduate enrollments of greater than 10,000 students (M = 16.325, SD = 3.624), F (5, 1341) = 2.518, p = .028. Also, the Index of Administrative Involvement mean for institutions with undergraduate enrollments of 2,000 to 3,000 students (M = 17.286, SD = 2.557) was significantly higher than the Index of Administrative Involvement mean for institutions with undergraduate enrollments of greater than 10,000 students (M = 16.325, SD = 3.624). Since the ANOVA identified significant differences in Index of Administrative Involvement means based on 1995 undergraduate enrollment, a Tukey's honestly significant difference test was used to identify the pairs of means that differed significantly.

Table 49

ANOVA Comparing Means on the Index of Administrative Involvement for Groups of Institutions Based on 1995 Undergraduate Enrollment Group

Source	SS	df	MS	F	p
Between	118.722	5	23.744	2.518	.028
Within	12647.855	1341	9.432		
Total	12766.576	1346			

A post hoc analysis using Tukey's honestly significant difference test identified two pairs of Index of Administrative Involvement in Student Outcomes Assessment Decision-making means that differed significantly (see Table 50). The Index of Administrative Involvement mean for institutions with enrollments of greater than 10,000 students was significantly lower than the Index of Administrative Involvement means for two of the smaller enrollment groups.

Table 50

Results of Tukey's Honestly Significant Difference Test for Comparing Index of Administrative Involvement 1995 Undergraduate Enrollment Group Means (Pairs for Which Differences Were Significant)

Mean 1	Mean 2	Mean Difference	p
Less than 1,000	Greater than 10,000	.921	.038
2,000 to 3,000	Greater than 10,000	.961	.021

Additional Analysis, Index of Funding Sources

In addition to the statistical analyses for the hypotheses, ANOVAs were conducted for the Index of Funding Sources Used to Improve Student Assessment Practices. The ANOVAs were used to determine if differences existed between or among funding sources by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment group. An alpha level of .05 was used for all statistical calculations.

Index of Funding Sources Used to Improve Student Assessment Practices means and standard deviations for public and private non-profit institutions are shown in Table 51. Since it appeared that the Index of Funding Sources means based on institutional control were different, a one-way ANOVA was used to identify a significant difference.

Table 51

Descriptive Statistics for Index of Funding Sources by Institutional Control

Institutional Control	N	M	SD
Public	881	1.003	.855
Private non-profit	505	.891	.818
Total	1386	.962	.843

The results of a one-way ANOVA comparing Index of Funding Sources means from public and private non-profit institutions are reported in Table 52. Results of the ANOVA indicated that a significant difference existed between the Index of Funding Sources means based on institutional control. This analysis showed that the Index of Funding Sources mean for public institutions (M = 1.003, SD = .855) was significantly higher than the Index of Funding Sources mean for private non-profit institutions (M = .891, SD = .818), F (1, 1384) = 5.719, p = .017.

Table 52

ANOVA Comparing Means on the Index of Funding Sources for Groups of Institutions Based on Institutional Control

Source	SS	df	MS	F	p
Between	4.049	1	4.049	5.719	.017
Within	980.000	1384	.708		
Total	984.049	1385			

Index of Funding Sources Used to Improve Student Assessment Practices means and standard deviations for Carnegie Classifications are shown in Table 53. The Index of Funding Sources means based on Carnegie Classification ranged from .429 to 1.059, so a one-way ANOVA was used to identify significant differences.

Table 53

Descriptive Statistics for Index of Funding Sources by Carnegie Classification

Carnegie Classification	N	M	SD
Research I	52	.788	.871
Research II	28	.964	.922
Doctoral I	27	.926	.958
Doctoral II	38	1.000	.870
Master's I	262	1.046	.847
Master's II	51	1.059	.785
Baccalaureate I	72	.847	.816
Baccalaureate II	243	.996	.898
Associate of Arts	544	.958	.830
Tribal	7	.429	.535
Total	1324	.971	.850

The results of a one-way ANOVA comparing Index of Funding Sources for Improving Student Assessment Practices means from Research I and II, Doctoral I and II, Master's I and II, Baccalaureate I and II, Associate of Arts, and Tribal institutions are reported in Table 54. Results of the ANOVA indicated that no significant differences existed among the Index of Funding Sources means based on Carnegie Classification. This analysis showed that the Index of Funding Sources means based on Carnegie Classification do not differ significantly, F (9, 1314) = 1.090, p = .367.

Table 54

ANOVA Comparing Means on the Index of Funding Sources for Groups of Institutions Based on Carnegie Classification

Source	SS	df	MS	F	p
Between	7.089	9	.788	1.090	.367
Within	949.820	1314	.723		
Total	956.909	1323			

Index of Funding Sources Used to Improve Student Assessment Practices means and standard deviations for regional accrediting agencies are shown in Table 55. The Index of Funding Sources means based on regional accrediting agency ranged from .581 to 1.200, so a one-way ANOVA was used to identify significant differences.

Table 55

Descriptive Statistics for Index of Funding Sources by Regional Accrediting Agency

Accrediting Agency	N	M	SD
Middle States	189	.878	.864
North Central	529	.981	.790
New England	86	.581	.804
Northwest	80	1.200	1.072
Southern	421	.990	.839
Western	81	1.062	.812
Total	1386	.962	.843

The results of a one-way ANOVA comparing Index of Funding Sources means from Middle States, North Central, New England, Northwest, Southern, and Western institutions are reported in Table 56. Results of the ANOVA indicated that significant differences existed among the Index of Funding Sources means based on regional accrediting agency. This analysis showed that the Index of Funding Sources mean for New England institutions (M = .581, SD = .804) was significantly lower than the Index of Funding Sources mean for Northwest institutions (M = 1.200, SD = 1.072), F (5, 1380) = 5.625, p = .000. In addition, the Index of Funding Sources mean for Western institutions (M = 1.062, SD = .812) was significantly higher than the Index of Funding Sources mean for New England institutions (M = .581, SD = .804). Since the ANOVA identified significant differences in Index of Funding Sources means based on regional accrediting agency, a Tukey's honestly significant difference test was used to identify the pairs of means that differed significantly.

Table 56

ANOVA Comparing Means on the Index of Funding Sources for Groups of Institutions Based on Regional Accrediting Agency

Source	SS	df	MS	F	p
Between	19.653	5	3.931	5.625	.000
Within	964.396	1380	.699		
Total	984.049	1385			

A post hoc analysis using Tukey's honestly significant difference test identified five pairs of Index of Funding Sources Used to Improve Student Assessment Practices means based on regional accrediting agency that differed significantly (see Table 57). The Index of Funding Sources mean for New England institutions was significantly lower than the Index of Funding Sources means for Northwest, Southern, and Western institutions.

Table 57

Results of Tukey's Honestly Significant Difference Test for Comparing Index of Funding Sources Regional Accrediting Agency Means (Pairs for Which Differences Were Significant)

Mean 1	Mean 2	Mean Difference	p
Middle States	Northwest	-.322	.045
North Central	New England	.400	.001
New England	Northwest	-.619	.000
New England	Southern	-.409	.001
New England	Western	-.480	.003

Index of Funding Sources Used to Improve Student Assessment Practices means and standard deviations for 1995 undergraduate enrollment groups are shown in Table 58. The Index of Funding Sources means based on 1995 undergraduate enrollment ranged from .779 to 1.125, so a one-way ANOVA was used to determine if significant differences existed.

Table 58

Descriptive Statistics for Index of Funding Sources by 1995 Undergraduate Enrollment Group

Enrollment Group	N	M	SD
Less than 1,000	190	.779	.779
1,000 to 2,000	299	.933	.766
2,000 to 3,000	209	.890	.845
3,000 to 5,000	201	1.090	.844
5,000 to 10,000	248	1.125	.925
Greater than 10,000	194	.995	.902
Total	1341	.972	.849

The results of a one-way ANOVA comparing Index of Funding Sources Used to Improve Student Assessment Practices means from institutions with 1995 undergraduate enrollments of: (a) less than 1,000, (b) 1,000 to 2,000, (c) 2,000 to 3,000, (d) 3,000 to 5,000, (e) 5,000 to 10,000, and (f) greater than 10,000 are reported in Table 59. Results of the ANOVA indicated that significant differences existed among the Index of Funding Sources means based on 1995 undergraduate enrollment. This analysis showed that the Index of Funding Sources mean for institutions with undergraduate enrollments of less than 1,000 students (M = .779, SD = .779) was significantly lower than the Index of Funding Sources mean for institutions with undergraduate enrollments of 5,000 to 10,000 students (M = 1.125, SD = .925), F (5, 1335) = 4.962, p = .000. In addition, the Index of

Funding Sources mean for institutions with undergraduate enrollments of 3,000 to 5,000 students (M = 1.090, SD = .844) was significantly higher than the Index of Funding Sources mean for institutions with undergraduate enrollments of less than 1,000 students (M = .779, SD = .779). Since the ANOVA identified significant differences in Index of Funding Sources means based on 1995 undergraduate enrollment, a Tukey's honestly significant difference test was used to identify the pairs of means that differed significantly.

Table 59

ANOVA Comparing Means on the Index of Funding Sources for Groups of Institutions Based on 1995 Undergraduate Enrollment Group

Source	SS	df	MS	F	p
Between	17.624	5	3.525	4.962	.000
Within	948.355	1335	.710		
Total	965.979	1340			

A post hoc analysis using Tukey's honestly significant difference test identified three pairs of Index of Funding Sources Used to Improve Student Assessment Practices means based on 1995 undergraduate enrollment that differed significantly (see Table 60). The Index of Funding Sources mean for institutions with undergraduate enrollments of 5,000 to 10,000 students was significantly higher than the Index of Funding Sources means for institutions with undergraduate enrollments of less than 1,000 and 2,000 to 3,000 students.

Table 60

Results of Tukey's Honestly Significant Difference Test for Comparing Index of Funding Sources 1995 Undergraduate Enrollment Group Means (Pairs for Which Differences Were Significant)

Mean 1	Mean 2	Mean Difference	p
Less than 1,000	3,000 to 5,000	-.311	.004
Less than 1,000	5,000 to 10,000	-.346	.000
2,000 to 3,000	5,000 to 10,000	-.235	.035

CHAPTER 5

CONCLUSIONS, DISCUSSION, RECOMMENDATIONS

This chapter provides a summary of the conclusions and a discussion of the findings related to the study. In addition, recommendations are provided for further research in the area.

Conclusions

The purpose of this study was to examine relationships among certain institutional faculty, administrative, and funding qualities and the use of student outcomes assessment "best practices" at American two- and four-year colleges and universities. The study concerned identifying institutions' faculty and administrative decision-making involvement levels and sources of internal and external funding. Indexes of ISSA questions concerning faculty and administrative student outcomes assessment decision-making involvement and sources of funding used to improve student assessment were constructed and correlated with an index, which was also constructed by the researcher, of student outcomes assessment best practices survey items. The Best Practices Index, the Index of Faculty Involvement in Student Outcomes Assessment Decision-making, the Index of Administrative Involvement in Student Outcomes Assessment Decision-making, and the Index of Funding Sources Used to Improve Student Assessment Practices provided the data by which to measure the strengths of the relationships. The indexes were also used to determine whether significant differences by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment existed in best practices student outcomes assessment programs utilized by the various institutions comprising these subgroups.

Five null hypotheses were tested in an attempt to identify any significant relationships and differences between and among faculty involvement, administrative involvement, and funding characteristics. This analysis was conducted for all institutions as a group, and additional analyses were conducted by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment. Moderate but significant relationships were found between all pairs of independent and dependent variables when all institutions were analyzed as a group. That is, significant relationships were found between the predictors and the institutional best practice criterion. Furthermore, additional analyses revealed relationships between most predictors and the criterion variable regardless of the institutions' control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment.

The findings of this empirical study suggest that institutions' faculty and administrative involvement levels in student assessment and the variety of funding sources used to improve student assessment are positively related to institutions' uses of best practices in student outcomes assessment. Therefore, the relationships between faculty, administrative, and funding elements and the use of student outcomes assessment best practices at American higher education institutions are important for campus assessment proponents to understand and strengthen if outcomes assessment programs are to be established, maintained, and expanded.

Discussion

In the five null hypotheses examined in this study, all of the independent variables (faculty, administrative, and funding) were moderately but significantly related to the dependent variable (best practices). Significant relationships were found between the Best Practices Index and the predictor variables (faculty involvement, administrative involvement, and variety of funding sources) for most institutional subgroups (institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment group). Thus, all of the five null hypotheses were rejected.

Relationship between Use of Best Practices and Faculty Involvement in Student Assessment. A weak positive correlation was found between faculty involvement in student outcomes assessment decision-making and the use of institutional outcomes assessment best practices. Furthermore, weak but significant relationships existed between faculty decision-making involvement and use of best assessment practices by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment. These findings suggest that faculty decision-making involvement is related to institutions' use of assessment best practices at institutions of various sizes and types. Therefore, to develop student outcomes assessment programs, assessment practitioners must encourage faculty involvement by increasing: (a) faculty governance of institutional support for student assessment, (b) faculty service on planning and coordinating assessment committees, (c) faculty leadership of such committees, (d) faculty approval of plan and policy changes, and (e) faculty control of routine assessment support activities. Assessment practitioners could encourage faculty participation in institutional assessment activities through rewards, which could take the form of significant recognition (i.e., approval, commendation, etc.), time, or money. However, time and money rewards should be carefully chosen to best suit the institution's long-term resources for providing them.

This conclusion is consistent with observations reported by Astin (1991) and Johnson et al. (1991). Astin urged future assessment leaders to tailor assessment results for the institutional members who will make the academic and administrative student-related decisions. From the American Council on Education/Higher Education Panel Survey 79 "Survey of Student Assessment Programs" results, Johnson et al. concluded that increased faculty involvement strengthens comprehensive student outcomes assessment programs. Johnson et al. suggested that weak faculty involvement decreases not only the credibility of the assessment program but also the achievement of the program on campus. Determining the current level of faculty involvement in student outcomes assessment programs at American colleges and universities and exploring the potential relationship outcomes assessment programs optimizing best practices would be of great interest to outcomes assessment practitioners. In future student outcomes assessment programs, Astin predicted that faculty members would continue to strongly influence the processes leading to instructional change and improvement.

Although a relationship was found between faculty involvement in student outcomes assessment decision-making and best student assessment practices, as suggested in the literature, this study found the strength of the relationship to be weak. This suggests that faculty influence alone probably is not sufficient for exclusively establishing, maintaining, or expanding a student outcomes assessment program.

Relationship between Use of Best Practices and Administrative Involvement in Student Assessment. A moderate, positive correlation was found between administrative involvement in student outcomes assessment decision-making and the use of institutional outcomes assessment best practices. Moreover, moderate but significant relationships existed between administrative decision making involvement and use of best assessment practices by Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment. These findings suggest that administrative decision-making involvement is related to institutions' use of assessment best practices at institutions of various sizes and types. Hence, to develop student outcomes assessment programs, assessment practitioners must encourage administrative participation in outcomes assessment programs by increasing: (a) top-down administrative support and commitment, (b) the number of administrators on assessment planning and coordinating committees, (c) the opportunities for administrators to chair such committees, (d) the administrative approval of plan and policy changes, and (e) administrative operation of routine assessment support activities. Assessment practitioners could encourage administrative participation in assessment programs by convincing administrators that not only is top-down support necessary for an assessment program's continued existence, but that improvements resulting from assessment will eventually increase the returns of the institution. Nevertheless, such returns will not result immediately, so assessment practitioners should be careful when selling an assessment program and the benefits of participating.

Consequently, since faculty members ought to use assessment results to improve student learning (Nichols, 1991), faculty members must be the leaders of the assessment of student learning whereas administrators should provide organizational support for student outcomes assessment. This study uses the responses from a variety of established and continuing student outcomes assessment programs at a variety of higher education institutions to provide a current perspective on American higher education institutions' pursuit of institutional effectiveness. Student outcomes assessment for institutional effectiveness as well as accreditation requires a campus assessment proponent, who has the CEO's endorsement, to maintain and expand the institutional student outcomes assessment processes while faculty members lead the assessment movement for improvement of learning and teaching (Nichols).

Although a relationship was found between administrative involvement in student assessment decision-making and best student assessment practices, as suggested in the literature, this study found the strength of the relationship to be moderate. This suggests that administrative influence alone probably is not sufficient for exclusively establishing, maintaining, or expanding a student outcomes assessment program.

Relationship between Use of Best Practices and Variety of Funding Sources Used for Student Assessment. A weak positive correlation was found between the number of categories of student outcomes assessment program funding sources and the use of institutional outcomes assessment best practices. Furthermore, weak but significant relationships existed between internal and external funding sources utilized by colleges and universities to improve assessment practices and use of best assessment practices by institutional control, regional accrediting agency, and 1995 undergraduate enrollment. These findings suggest that the funding sources used to improve assessment practices are related to the use of assessment best practices at institutions of various sizes and types. Therefore, to develop student outcomes assessment programs, assessment practitioners must improve funding availability by: (a) increasing the number of grants awarded for special data collection projects to improve assessment practices and opportunities, and (b) changing the type of institutional resource allocation that primarily funds the outcomes assessment program (i.e., making the program a regular institutional budget item). Assessment practitioners could increase funding by demonstrating the learning or teaching improvements made using student outcomes assessment studies. Funding providers are likely to be more interested in distributing money to institutions that demonstrated improvement and have practical assessment plans in place.

In addition to faculty and administrative decision-making involvement, locating and applying adequate financial resources to establish and maintain an effective student outcomes assessment program will be of great concern to outcomes assessment program developers (Johnson et al., 1991). Banta (1997) asked assessment proponents for an examination of the relationships among characteristics of successful student outcomes assessment programs, financial resources, and educators. Thus, understanding the relationships among variables related to the maintenance of student outcomes assessment program is not only important to those who initiate such programs but those who lead and manage them.

Although a relationship was found between sources of funding used to improve student assessment practices and best student assessment practices, as suggested in the literature, this study found the strength of the relationship to be weak. This suggests that funding sources alone probably are not sufficient for exclusively establishing, maintaining, or expanding a student outcomes assessment program.

Relationship between Use of Best Practices and the Combined Influence of All Predictor Variables. A moderate positive correlation was found between the combined independent variables and the dependent variable. In addition, each of the independent variables were found to be important predictors of the dependent variable, and the combination of these independent variables as predictors is useful for estimating the dependent variable. Furthermore, the regression model is predictive of the Best Practices Index in most subgroups of institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment. This finding suggests that faculty, administrative, and funding sources are related to the use of student outcomes assessment best practices. Thus, to develop student outcomes assessment programs, assessment practitioners must encourage faculty and administrative participation in the assessment planning, implementation, and guidance activities. In addition, funding must be acquired to apply toward improving student outcomes assessment practices. Assessment practitioners should recognize that the relationship between faculty involvement, administrative involvement, and funding issues is useful when increasing the degree of each of these for program development. Increased administrative and funding support should be valuable to encourage more faculty involvement whereas funding sources would be more likely to provide money to efforts with visible faculty and administrative commitment.

Astin (1991) suggested that establishing student outcomes assessment programs is a demonstration of institutional commitment to student learning and improving higher education's purpose. Therefore, the existence of outcomes assessment programs on individual campuses verifies the institutional commitment to student learning and the purpose of higher education (Astin). Banta (1993) predicted that assessment's future lies in the revision of institutional missions and the improvement of instruction and curricula. Assessment efforts that associate purposes, missions, goals, and objectives for higher education should be equally meaningful to faculty and administrators. High levels of faculty and administrative cooperation in student outcomes assessment will be evident at the institutions where outcomes assessment is accepted and constantly developed (Banta). Since assessment program success depends on the whole institution, being aware of strong relationships among institutional functions, processes, and components is consequential to assessment expansion.

Although a relationship was found between faculty involvement, administrative involvement, funding sources, and best student assessment practices, as suggested in the literature, this study found the strength of the relationship to be moderate. This suggests that the combined factors alone may not be sufficient for exclusively establishing, maintaining, or expanding a student outcomes assessment program.

Differences in Extent of Best Practice Use by Institutional Type. This study also examined whether institutional responses to the items comprising the Best Practices Index differed among institutions of various types, based on institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment groups. The results of the ANOVA analyses confirmed that institutional Best Practices Index responses were significantly different between: public and private non-profit institutions, the 10 Carnegie Classifications represented, the six regional accrediting agencies, and the six enrollment groups. These findings suggest that student outcomes assessment best practices are utilized most extensively by small, private non-profit Baccalaureate II and Master's I institutions in the Southern accrediting region. To develop student outcomes assessment programs using this information, assessment practitioners must optimize their best student outcomes assessment practices currently in use by: (a) monitoring student knowledge, skills, aptitudes, and attitudes through a variety of methods; (b) planning and guiding assessment through committees; (c) establishing an office to handle routine assessment support; (d) using academic planning and review results to improve student academic support; and (e) ensuring academic improvement decisions are made using student outcomes assessment results. However, best practices in student outcomes assessment are used extensively in many institutions regardless of control, Carnegie Classification, location, or size.

Additional Analyses. The additional analyses examined the differences between the Index of Faculty Involvement in Student Outcomes Assessment Decision-making, the Index of Administrative Involvement in Student Outcomes Assessment Decision-making, and the Index of Funding Sources Used to Improve Student Assessment Practices by institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment. The results of the ANOVA analyses confirmed significant differences existed among institutional types based on institutional control, Carnegie Classification, regional accrediting agency, and 1995 undergraduate enrollment group in each index of faculty involvement, administrative involvement, and funding sources. These findings suggest that faculty involvement, administrative involvement, and funding sources are utilized differently at different types of institutions. As a result, the faculty, administrative, and funding qualities of a student outcomes assessment program may be related to a certain type of institution in a particular accrediting agency. In other words, some institutions may be more favorable for establishing, maintaining, or expanding outcomes assessment programs than other institutions.

In the Index of Faculty Involvement in Student Outcomes Assessment Decision-making, private non-profit institutions had a higher level of faculty involvement than public institutions. In Carnegie Classifications, the Master's II classification in the Index of Faculty Involvement had the highest level of faculty involvement in student outcomes assessment decision-making. Institutions in the North Central regional accrediting agency were more likely to have faculty involvement in student outcomes assessment decision-making than institutions in other accrediting agencies. In addition, institutions with larger undergraduate enrollments had lower levels of faculty involvement. These findings suggest that higher levels of faculty involvement in student outcomes assessment decision-making exist at small, private non-profit Master's II and Baccalaureate II institutions in the North Central accrediting region. Assessment practitioners could encourage faculty participation in outcomes assessment programs by increasing: (a) faculty support for student assessment, (b) faculty service on assessment committees, (c) faculty assessment committee chairs, (d) faculty approval of policy changes, and (e) faculty assessment support activities. This additional analysis supports a conclusion that different sizes and types of institutions have different extents of faculty involvement, which may influence the leadership of student outcomes assessment programs.

The Index of Administrative Involvement in Student Outcomes Assessment Decision-making did not differ significantly at public and private non-profit institutions. However, in Carnegie Classifications, the Baccalaureate II classification had the highest level of administrative involvement in student outcomes assessment decision-making. Institutions in the North Central or Northwest regional accrediting agencies were more likely to have administrative involvement in student outcomes assessment decision-making than institutions in other accrediting agencies. In addition, institutions with larger undergraduate enrollments had lower levels of administrative involvement. These findings suggest that higher levels of administrative involvement in student outcomes assessment decision-making exist at smaller, private non-profit or public Baccalaureate II and Associates institutions in the North Central or Northwest accrediting region. Assessment practitioners could encourage administrative participation in outcomes assessment programs by increasing: (a) top-down administrative support, (b) the number of administrators on assessment committees, (c) administrators chairing assessment committees, (d) administrative cooperation with policy changes, and (e) administrative assessment support. This additional analysis supports a conclusion that different sizes and types of institutions have different extents of administrative involvement, which may influence the management of student outcomes assessment programs.

In the Index of Funding Sources Used to Improve Student Assessment Practices, public institutions used more of a variety of funding sources than private non-profit institutions. However, in Carnegie Classifications, no differences existed in the Index of Funding Sources for using a variety of funding sources to improve student assessment practices. Institutions in the Northwest regional accrediting agency were more likely to use a variety of funding sources to improve student assessment practices than institutions in other accrediting agencies. In addition, institutions with smaller undergraduate enrollments used a more limited variety of funding sources than institutions with larger undergraduate enrollments. These findings suggest that a wider variety of funding sources used to improve student assessment is used at larger, public institutions of any Carnegie Classification in the Northwest accrediting region. Assessment practitioners could improve funding availability by: (a) increasing the number of grants awarded to improve assessment practices and opportunities, and (b) changing the type of institutional resource allocation that primarily funds the outcomes assessment program (i.e., making the program a regular institutional budget item). This additional analysis supports a conclusion that different sizes and types of institutions use a variety of funding sources, which may influence the development of student outcomes assessment programs.

The strengths of the relationships suggest that faculty, administrative, and funding influence alone probably are not sufficient for exclusively maintaining an established student outcomes assessment program. However, understanding the relationships between best practices in student outcomes assessment programs and factors such as faculty and administrative decision-making involvement and funding sources at American higher education institutions will enable practitioners to develop or apply assessment program models under various institutional circumstances. Knowing that faculty and administrative decision-making involvement and funding sources relate positively to best assessment practices, assessment leaders can gradually implement student outcomes assessment practices or develop existing relationships among faculty, administration, and funding sources that will be the foundation for student outcomes assessment programs.

Recommendations

The results of this study indicated that the faculty, administrative, and funding variables were moderately related and significantly different by institutional control, Carnegie Classification, regional accrediting agency, and undergraduate enrollment. Therefore, the first recommendation is to increase faculty and administrative involvement in student outcomes assessment decision-making and the variety of funding sources used to improve student assessment practices. Communication is essential to making these increases. Communicating expectations about intended results of student outcomes assessment programs to faculty members, administrators, and funding sources should stimulate more innovative assessment practices – more best practices used in student outcomes assessment programs. First, assessment must be defined and interpreted so that various groups understand the concept, and the purpose of assessment must be communicated to faculty, administrators, and funding sources. Then, faculty members must communicate to administrators the amount of resources needed for efficiently and effectively assessing student outcomes. Subsequently, administrators must communicate more clearly to funding sources the amount of financial support needed. In addition, funding sources must communicate expectations about providing funding for assessment projects. As a result, improving the communication among these related student outcomes assessment parties should sufficiently ensure increases in faculty and administrative involvement and funding sources used for improvements are increased.

Thus, the second recommendation is to conduct additional research on whether increasing faculty and administrative decision-making involvement and increasing the variety of funding sources used for assessment improvements has an impact on student outcomes assessment programs. A study concerning the impact of increasing faculty and administrative decision-making involvement and funding sources on student outcomes assessment programs could also be used to identify strengths, weaknesses, opportunities, and threats in operating assessment programs. The identification of weaknesses and threats to outcomes assessment program operations would also be particularly useful to assessment practitioners at a variety of institutions.

This study is significant in student outcomes assessment research because it examined the strengths of the relationships between faculty, administration, and funding assessment components and the utilization of certain "best practices" in student outcomes assessment programs. The findings of this study contribute to the understanding of student outcomes assessment as an essential higher education administration function for improving institutional mission achievement. The relationship strengths and significant differences found in this study may be of use to assessment practitioners, who are struggling with outcomes assessment program implementation and the on-campus support systems to establish, maintain, and expand such a program.

As a hypothetical example to demonstrate the use of the findings of this study, an institution needs an assessment coordinator to pull its assessment program together. The institution wants to hire an individual who can guide a productive outcomes assessment program, gather data from multiple sources, institute policy changes, and improve programs using assessment results. Consequently, accomplishing such activities requires using best assessment practices, sources of funding, administrative influence, and faculty action, respectively. Therefore, the findings of this study that positive relationships exist among faculty and administrative decision-making involvement, variety of funding sources, and best assessment practices support a conclusion that assessment at colleges and universities can grow under certain circumstances. Assessment practitioners, as they work on developing student outcomes assessment programs, should consider these relationships. Thus, as the literature and the findings of this study suggest, faculty and administrative decision-making involvement and sources of funding are important components of higher education administration to build on when institutionalizing student outcomes assessment programs.

However, advancing the study of student outcomes assessment programs in American higher education has yet to be achieved in outcomes assessment research. Faculty, administrative, and funding characteristics were found to be positively and significantly related to the student outcomes assessment best practices of interest in this study. According to most assessment experts, faculty, administration, and funding should be related to best practices because all four variables are required to effectively operate student outcomes assessment programs. Differences were found among the independent and dependent variables by institutional control, Carnegie Classification, regional accrediting agency, and undergraduate enrollment. According to most assessment experts, differences should exist in the variables at different institutions because smaller organizations seem to buy into assessment more quickly, or some regional accrediting agencies institute more progressive standards than others. The significance of this study was that a recent comprehensive study of student assessment (NCPI Project 5.2) was reorganized to examine student assessment quantitatively and from a different angle.

The findings of this study indeed demonstrated that faculty, administrative, and funding are important elements and are related to best student outcomes assessment practices. Studying and advancing the practices of student outcomes assessment is beneficial not only for meeting accreditation standards but for improving teaching and learning. If improving the authority of those who administer student outcomes assessment programs is imperative, the findings from future student outcomes assessment studies could be used to establish standards for operating student outcomes assessment programs that define and explain the purpose of assessment in each regional accrediting agency. Such findings would also be useful for strengthening the authority of accrediting agencies so that demonstrating compliance with standards is something desired by all members of an institution. However, for improving teaching and learning, having the power to change higher education functions affects all educational stakeholders. In particular, knowing the relationships between certain stakeholders and student outcomes assessment programs allows shaping such relationships to improve the effectiveness of the student outcomes assessment system. Consequently, repairing or removing the inefficient relationships that affect the effectiveness of outcomes assessment systems would likely improve teaching and learning. More research on the relationships between faculty, administrative, and funding elements and student outcomes assessment practices would provide information for improving important relationships in the outcomes assessment system as well as important relationships in the institution.

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APPENDIXES

A. The Inventory of Institutional Support for Student Assessment

Inventory of Institutional Support for Student Assessment

For The Research Program on
Institutional Support for Student Assessment

NCPI
National
Center for
Postsecondary
Improvement

NCPI - Project 5.2
University of Michigan
Ann Arbor, Michigan 48109-1259

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Appendix A. (continued)

An Introduction to the ISSA

The *Institutional Support for Student Assessment Inventory* (ISSA) was developed as part of a national research program examining the *Organizational and Administrative Support for Student Assessment* for the National Center for Postsecondary Improvement (NCPI). The ISSA is designed as an institutional inventory of the organizational and administrative practices that have been designed and implemented to support the use of *student assessment* on your campus.

Institutional Support Practices are those organized activities, policies, and procedures that your institution has intentionally designed to enhance the practice of student assessment. *Student Assessment refers to those activities focused on measuring dimensions of student performance other than traditional end of course grading.*

This national survey is designed to identify institutional support practices for undergraduate student assessment. The project also examines the factors influencing the adoption of various support practices and how those practices enhance the impact of student assessment for institutional improvement.

We understand that being selected for this survey will require a commitment of time to complete and we appreciate your involvement. This instrument is also intended as an institutional self-assessment inventory to facilitate examination of your institution's own organizational and administrative practices which support student assessment. We encourage each institution to use the survey in this manner. You will receive a summary report of survey responses to all compare with your own institutional profile.

Completing the ISSA

The main purpose is to obtain a profile of your institution's current approach to undergraduate student assessment and its support practices. The inventory may be completed by one individual or group of individuals who are most familiar with the patterns of undergraduate student assessment on your campus. It should take less than one hour to complete.

- Please keep in mind that the questions refer to *undergraduate education* at your institution.
- Respond to each item in the questionnaire to the best of your knowledge.

The questionnaire is coded to allow follow up only. Individual institutions will not be identified in any analyses or reports.

Return the completed questionnaire in the enclosed return envelope. Any questions concerning the survey can be addressed to the following:

National Center for Postsecondary Improvement Project 5.2
School of Education
University of Michigan
610 E. University, Room 2339
Ann Arbor, MI 48109-1259
Phone: 734-647-2464
Fax: 734-936-2741
Email: ncpi.proj52@umich.edu

Marvin W. Peterson, Project Director

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Appendix A. (continued)

I. Institutional Approach to Student Assessment

A. Type, Extent and Timing of Student Assessment

We are interested in your institution's routine practices of collecting different types of undergraduate student performance data, the extent to which they are collected, and when they are collected. For each of the following content types of undergraduate student performance data:

1) indicate the extent to which each type is collected
2) for each type of data collected, check whether it is collected at entry, during enrollment, at exit, or a combination of these data collection points.

Type	Extent				Timing		
Currently Enrolled Students	Not Collected	Collected for some students	Collected for many students	Collected for all students	Collected at entry	Collected while enrolled	Collected at exit
	(circle one number for each item)				(check all that apply for each item)		
1. Student academic intentions or expectations	1	2	3	4	___	___	___
2. Basic college-readiness skills (reading, writing, mathematics, etc.)	1	2	3	4	___	___	___
3. Higher-order skills (critical thinking, problem solving)	1	2	3	4	___	___	___
4. General education competencies	1	2	3	4	___	___	___
5. Competence in major field of study (discipline- or program-specific knowledge)	1	2	3	4	___	___	___
6. Vocational or professional skills	1	2	3	4	___	___	___
7. Personal growth and affective development (values, attitudes, social development, etc.)	1	2	3	4	___	___	___
8. Student experiences and involvement with institution	1	2	3	4	___	___	___
9. Student satisfaction with institution	1	2	3	4	___	___	___
10. Student academic progress (retention, graduation rates)	1	2	3	4			
Former Students							
11. Vocational or professional outcomes (career goals, job attainment or performance)	1	2	3	4			
12. Further education (transfer, degree attainment, graduate study)	1	2	3	4			
13. Civic or social roles (political, social or community involvement)	1	2	3	4			
14. Satisfaction and experiences with institution after leaving	1	2	3	4			

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Appendix A. (continued)

B. Student Assessment Instruments

Does your institution employ institutionally or externally developed instruments or tests for the following types of undergraduate student assessment information? (circle all that apply for each item):

	Source of Instrument			
Content of Instrument	Not used	Institutionally developed	State provided	Commercially available
1. Student plans, goals, or expectations	1	2	3	4
2. Basic college-readiness skills (reading, writing, mathematics, etc.)	1	2	3	4
3. Higher-order skills (critical thinking, problem solving)	1	2	3	4
4. General education competencies	1	2	3	4
5. Competence in major field of study (discipline- or program-specific knowledge)	1	2	3	4
6. Vocational or professional skills (excluding licensure exams)	1	2	3	4
7. Personal growth and affective development (values, attitudes, social development, etc.)	1	2	3	4
8. Student effort, experiences or involvement with institution	1	2	3	4
9. Student satisfaction with institution	1	2	3	4
10. Alumni satisfaction and experiences	1	2	3	4

C. Other Student Assessment Methods

To what extent does your institution use the following methods to collect undergraduate student assessment information? (circle one number for each item):

Other Student Assessment Methods	Not used	Used in some units*	Used in most units	Used in all units
1. Observations of student performance (simulations, demonstrations, lab)	1	2	3	4
2. Student portfolios or comprehensive projects	1	2	3	4
3. Student performance in capstone courses	1	2	3	4
4. Student interviews or focus groups	1	2	3	4
5. Transcript analysis	1	2	3	4
6. External examination of students (licensure exams, external reviewers)	1	2	3	4
7. Special surveys of or interviews with withdrawing students	1	2	3	4
8. Alumni interviews or focus groups	1	2	3	4
9. Employer interviews or focus groups	1	2	3	4

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* "Unit" refers to academic areas such as departments, divisions, schools, or colleges

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Appendix A. (continued)

D. Student Sub-Populations

Does your institution use different assessment methods for the following sub-populations of undergraduate students? (check one for each item):

Students		Different	Same as Other
1.	Adult students	______	______
2.	Part-time students	______	______
3.	Minority students	______	______
4.	Distance education students	______	______

E. Student Assessment Studies

Does your institution conduct studies of the *relationship between* the following experiences and students' performance (check all that apply):

__ 1. Student course-taking patterns
__ 2. Exposure to different instructional or teaching methods
__ 3. Patterns of student-faculty interaction
__ 4. Extra-curricular activities
__ 5. Residence arrangements
__ 6. Student financial aid and/or concurrent employment
__ 7. Admission standards or policies
__ 8. Academic advising patterns
__ 9. Classroom, library and/or computing resources
__ 10. Do not study the relationship between the above experiences and student performance

F. Student Performance Profiles or Reports

Does your institution provide profiles or reports of appropriate student performance information at the following levels of aggregation (check all that apply):

__ 1. Institution wide
__ 2. Schools or colleges
__ 3. Academic programs or departments
__ 4. Special populations or subgroups/students
__ 5. By course or groups of courses
__ 6. Do not provide any reports

II. Institutional Support for Student Assessment

A. Institutional Emphasis

1. Your institutional mission statement explicitly (check all that apply):

__ a. emphasizes excellence in undergraduate education as an institutional priority
__ b. identifies the educational outcomes intended for your students
__ c. refers to student assessment as an important institutional activity
__ d. does not explicitly mention any of the above

2. For how many years has your institution engaged in student assessment? _____

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Appendix A. (continued)

B. Purpose of Student Assessment

The following are often intended purposes of an institution's undergraduate student assessment process. Please rate the importance of each for your institution. (circle one number for each item):

Purpose	No Importance	Minor Importance	Moderate Importance	Very Important
1. Preparing institutional self-study for accreditation	1	2	3	4
2. Meeting state reporting requirements	1	2	3	4
3. Guiding internal resource allocation decisions	1	2	3	4
4. Guiding undergraduate academic program improvement	1	2	3	4
5. Improving the achievement of undergraduate students	1	2	3	4
6. Improving faculty instructional performance	1	2	3	4
7. Other (briefly describe): ____________________	1	2	3	4

C. Administrative and Governance Activities

Institutions have introduced a variety of administrative or governance activities that address or promote student assessment. Does your institution engage in any of the following activities? (check all that apply):

___ 1. Annual presidential or other institution-wide initiatives, forums or seminars on student assessment
___ 2. Rewards or incentives for academic and student affairs administrators who promote use of student assessment in their unit
___ 3. Incentives for academic units to use student assessment information in their evaluation and improvement efforts
___ 4. Student assessment workshops for academic and student affairs administrators
___ 5. Board of trustees committee that addresses student assessment
___ 6. Faculty governance committee that addresses student assessment issues
___ 7. Student representation on student assessment committees

D. Support for Student Assessment

Use the scale below to rate the degree to which various groups within your institution support undergraduate student assessment activities (circle one number for each item):

	Very Unsupportive	Somewhat Unsupportive	Neutral, Unknown	Supportive	Very Supportive
1. Board of trustees	1	2	3	4	5
2. Chief executive officer	1	2	3	4	5
3. Academic affairs administrators	1	2	3	4	5
4. Student affairs administrators	1	2	3	4	5
5. Faculty governance	1	2	3	4	5
6. Students	1	2	3	4	5

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E. Planning and Coordinating Student Assessment

1. Which of the following best describes your institution's *plan or policy* for undergraduate student assessment? Your institution (check all that apply):

— a. has a formally adopted institutional plan or policy requiring specified undergraduate student assessment activities of all academic units or programs
— b. has a formally adopted plan or policy for undergraduate student assessment in some academic units or program areas (e.g. general education or academic majors)
— c. has a formally adopted institutional plan or policy requiring all academic units or programs to develop their own undergraduate student assessment plan
— d. has a formally adopted institutional plan or policy stipulating institution-wide activities to be conducted by a central committee, office, or officer
— e. has no formal plan or policy but academic units or programs are encouraged to conduct their own undergraduate student assessment activities
— f. is currently developing a plan or policy for undergraduate student assessment
— g. does not have an undergraduate student assessment plan or policy (SKIP TO QUESTION E-6)

2. Is there an *institution-wide group* (committee, task force, etc.) that is primarily responsible for *ongoing planning and policy setting* for undergraduate student assessment? (check one):

— a. yes
— b. no (SKIP TO QUESTION E-5)

3. If yes, who serves on this group? (check all that apply):

— a. Chief executive officer
— b. Academic affairs administrator(s)/staff
— c. Student affairs administrator(s)/staff
— d. Institutional research administrator(s)/staff
— e. Academic review and evaluation administrator(s)/staff
— f. Student assessment administrator(s)/staff
— g. Faculty
— h. Students
— i. Other ______________________________

4. Who has *executive responsibility* for or who *chairs* the institution-wide group responsible for the ongoing planning or policy-setting process for undergraduate student assessment? (check all that apply):

— a. Academic affairs administrator
— b. Student affairs administrator
— c. Institutional research officer
— d. Academic review and evaluation officer
— e. Student assessment officer (if separate)
— f. Faculty member
— g. Other ______________________________

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Appendix A. (continued)

5. Who *approves* any changes in your institution's plan or policies for undergraduate student assessment? (check all that apply):

— a. Board of trustees
— b. Chief executive officer
— c. Chief academic affairs officer
— d. Chief student affairs officer
— e. Institutional research officer
— f. Academic review and evaluation officer
— g. Student assessment officer
— j. Student government
— h. Academic senate or other faculty committee(s)
— i. Faculty union (IF YOUR FACULTY ARE NOT UNIONIZED, CHECK HERE _____)
— k. Other ____

6. Who has *operational* responsibility for your institution's day-to-day undergraduate student assessment activities (e.g., instrument development, data collection, analysis, and reporting)? (check all that apply):

— a. Academic affairs administrator
— b. Student affairs administrator
— c. Institutional research officer
— d. Academic review and evaluation officer
— e. Student assessment officer
— f. Faculty member(s)
— g. Other ____________________________________
— h. No one (SKIP TO QUESTION E8)

7. To whom does the individual with operational responsibility for day-to-day student assessment activities directly report? (check one):

— a. Chief executive officer
— b. Chief academic officer
— c. Chief student affairs officer
— d. Institutional research officer
— e. Academic review and evaluation officer
— f. Other ____

8. Is there an office which provides faculty consultation in using student assessment for instructional improvement or curriculum development? (check one):

— a. yes — b. no

9. If yes, what is the name of the office? ____

F. Evaluating Your Institution's Student Assessment Plan or Process

1. Has your institution evaluated its undergraduate student assessment process? (check one):

— a. yes, with a formal evaluation
— b. yes, with an informal evaluation
— c. currently developing evaluation plans (SKIP TO SECTION III)
— d. not currently evaluating or planning to evaluate assessment process (SKIP TO SECTION III)

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2. In evaluating your institution's student assessment process, which of the following elements of that process were reviewed? (check all that apply):

___ a. your student assessment plan and policies
___ b. the structure and responsibility for student assessment
___ c. achievement of your institution's intended objectives for student assessment
___ d. reliability and validity of student assessment instruments and methods
___ e. quality of data analysis
___ f. use of student assessment information in institutional decision-making
___ g. the problems encountered while conducting student assessment activities
___ h. comparison of the costs and benefits of student assessment

III. External Influences on Institutional Student Assessment Activities

A. State Role (FOR STATE-FUNDED INSTITUTIONS ONLY; ALL OTHERS SKIP TO QUESTION III. B-1)

1. Was your state's plan/requirement for student assessment primarily developed (check one)):

___ a. by state-level officials
___ b. through joint consultation between state officials and institutional representatives
___ c. no statewide plan or requirement for student assessment exists (SKIP TO QUESTION III. B-1)

2. State requirements for student assessment (check all that apply):

___ a. were an important reason for your institution to initiate undergraduate student assessment
___ b. have increased your institution's involvement in undergraduate student assessment
___ c. have not been a factor in your institution's undergraduate student assessment activities
___ d. have been a negative influence on your institution's undergraduate student assessment activities

3. Your state's reporting requirements include (check all that apply):

___ a. evidence that a student assessment plan is in place
___ b. measurement of state-mandated student performance indicators
___ c. institutionally-devised student performance indicators
___ d. evidence of institutional use of student assessment information

4. How has your state higher education agency reviewed or evaluated your institution's undergraduate student assessment plan or process after it was implemented? (check all that apply):

___ a. reviewed by state officials
___ b. reviewed using external reviewers
___ c. required an institutional self-review
___ d. no post hoc review has occurred (SKIP TO QUESTION B-1)

5. The state review of your institution's undergraduate student assessment plan or process included (check all that apply):

___ a. review of your institution's student assessment process itself
___ b. comparison of your institution's student performance record with your past performance
___ c. comparison of your institution's student performance record with peer institutions
___ d. comparison of your institution's student performance record with other institutions in your state
___ e. other (briefly describe) ________________________________

Appendix A. (continued)

B. Regional Accrediting Role in Student Assessment

1. Has your institution gone through a regional self study accreditation review which required undergraduate student assessment? (check one):

___ a. yes ___ b. no

2. Regional accreditation agency requirements for undergraduate student assessment (check all that apply):

___ a. were an important reason for your institution to initiate undergraduate student assessment
___ b. have increased your institution's involvement in undergraduate student assessment
___ c. have not been a factor in your institution's undergraduate student assessment activities
___ d. have been a negative influence on your institution's undergraduate student assessment activities

3. Your institution's regional accreditation agency requires (check all that apply):

___ a. evidence that a student assessment plan or process is in place
___ b. intended institutional uses of student assessment information
___ c. results of student assessment
___ d. evidence of actual institutional use of student assessment information
___ e. unfamiliar with regional accreditation requirements for student assessment

C. External Sources of Support for Assessment

1. Has your institution received external grants to improve undergraduate student assessment practices from any of the following? (check all that apply):

___ a. FIPSE
___ b. other federal agencies (please identify): ______________________________
___ c. a state incentive program
___ d. private foundations or corporate sources (please identify): ______________________________
___ e. no known external grants received

2. Has your institution used any of the following student assessment services offered by the following postsecondary organizations? (check all services that apply for each type of organization):

	Student Assessment Service Used				
Type of Postsecondary Organization	Not used or not available	Consultation services	Assessment conferences	Training workshops	Publications or research reports
a. Professional associations (Institutional, disciplinary, or administrative)	___	___	___	___	___
b. Regional accrediting association	___	___	___	___	___
c. State-level agency	___	___	___	___	___
d. Consortium of institutions	___	___	___	___	___

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IV. Academic Management Policies and Practices for Student Assessment

Institutions have a wide array of formally organized policies, activities, and procedures intended to enhance or support the collection and use of undergraduate student assessment information. The following policies and practices have been identified in many institutions.

FOR QUESTIONS A THROUGH D, INDICATE WHETHER THE FOLLOWING POLICIES OR PRACTICES EXIST AT YOUR INSTITUTION.

A. Resource Allocation for Student Assessment (check all that apply):

__ 1. An explicit operating budget allocation is made to support student assessment.
__ 2. An academic budget process that considers student performance indicators in resource allocation to academic units.
__ 3. An academic budget process that compares academic units on student performance indicators and allocates resources competitively.
__ 4. An academic budget process that rewards academic units for improvement based on their own past student performance indicators.

B. Student Assessment Information System (check all that apply):

__ 1. Key student assessment activities have been scheduled into the academic calendar.
__ 2. A computerized student information system which includes student performance indicators.
__ 3. A student information system which tracks individual students from application through graduation.
__ 4. A student assessment database which is integrated with faculty, curricular, and financial databases.

C. Access to Individual Student Assessment Information (check all that apply):

Student assessment information on individual students is available to:

__ 1. Institutional research, assessment or evaluation professionals
__ 2. Senior academic administrators
__ 3. Department chairs or academic program administrators
__ 4. Student affairs professionals
__ 5. Faculty advisors

D. Distribution of Student Assessment Reports and Studies (check all that apply):

Student assessment reports and studies or appropriate summaries are regularly distributed to:

__ 1. Students
__ 2. Faculty
__ 3. Academic administrators
__ 4. Student affairs professionals
__ 5. Employers
__ 6. The general public

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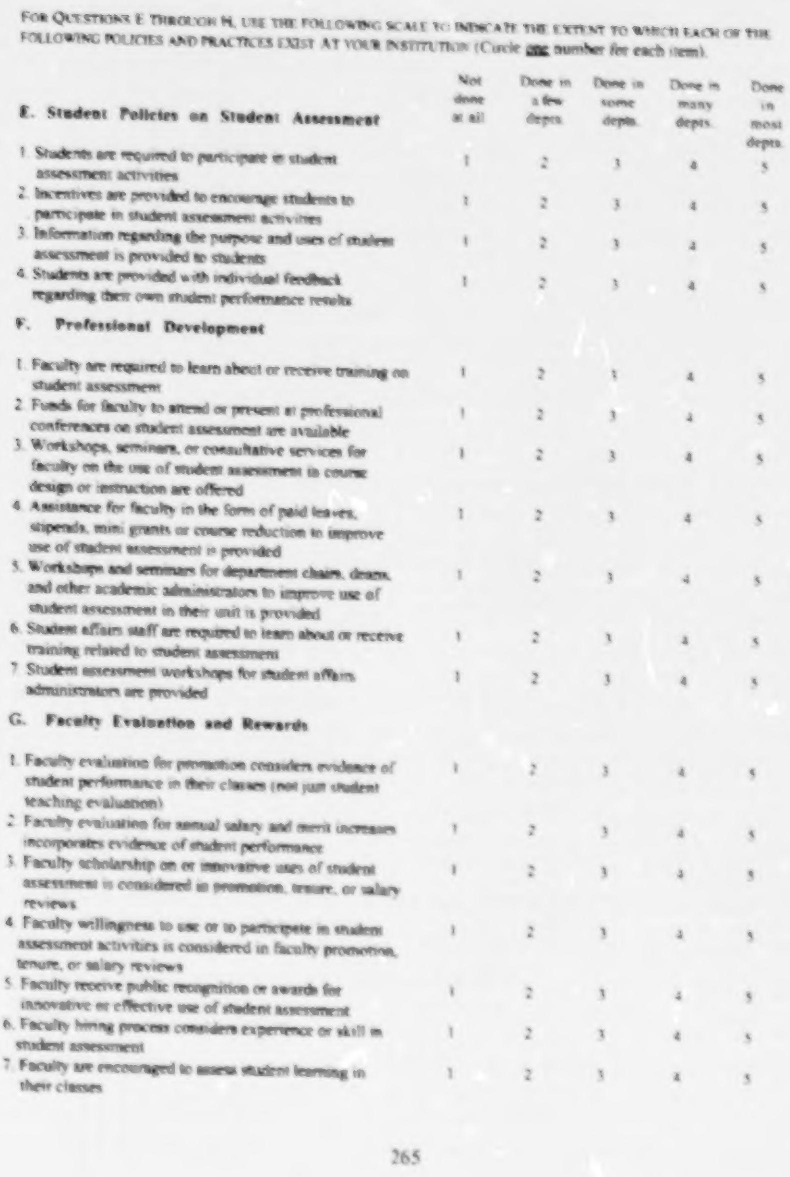
Appendix A. (continued)



FOR QUESTIONS E THROUGH H, USE THE FOLLOWING SCALE TO INDICATE THE EXTENT TO WHICH EACH OF THE FOLLOWING POLICIES AND PRACTICES EXIST AT YOUR INSTITUTION (Circle one number for each item).

E. Student Policies on Student Assessment	Not done at all	Done in a few depts.	Done in some depts.	Done in many depts.	Done in most depts.
1. Students are required to participate in student assessment activities	1	2	3	4	5
2. Incentives are provided to encourage students to participate in student assessment activities	1	2	3	4	5
3. Information regarding the purpose and uses of student assessment is provided to students	1	2	3	4	5
4. Students are provided with individual feedback regarding their own student performance results	1	2	3	4	5
F. Professional Development					
1. Faculty are required to learn about or receive training on student assessment	1	2	3	4	5
2. Funds for faculty to attend or present at professional conferences on student assessment are available	1	2	3	4	5
3. Workshops, seminars, or consultative services for faculty on the use of student assessment in course design or instruction are offered	1	2	3	4	5
4. Assistance for faculty in the form of paid leaves, stipends, mini grants or course reduction to improve use of student assessment is provided	1	2	3	4	5
5. Workshops and seminars for department chairs, deans, and other academic administrators to improve use of student assessment in their unit is provided	1	2	3	4	5
6. Student affairs staff are required to learn about or receive training related to student assessment	1	2	3	4	5
7. Student assessment workshops for student affairs administrators are provided	1	2	3	4	5
G. Faculty Evaluation and Rewards					
1. Faculty evaluation for promotion considers evidence of student performance in their classes (not just student teaching evaluation)	1	2	3	4	5
2. Faculty evaluation for annual salary and merit increases incorporates evidence of student performance	1	2	3	4	5
3. Faculty scholarship on or innovative uses of student assessment is considered in promotion, tenure, or salary reviews	1	2	3	4	5
4. Faculty willingness to use or to participate in student assessment activities is considered in faculty promotion, tenure, or salary reviews	1	2	3	4	5
5. Faculty receive public recognition or awards for innovative or effective use of student assessment	1	2	3	4	5
6. Faculty hiring process considers experience or skill in student assessment	1	2	3	4	5
7. Faculty are encouraged to assess student learning in their classes	1	2	3	4	5

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Appendix A. (continued)

B. Academic Planning and Review	Not done at all	Done in a few depts.	Done in some depts.	Done in many depts.	Done in most depts.
Your institution incorporates student performance data into the following processes:					
1. Academic department or undergraduate program planning or review	1	2	3	4	5
2. General education or core curriculum review	1	2	3	4	5
3. Course-level review and development	1	2	3	4	5
4. Review and planning for student academic support services	1	2	3	4	5

V. Impacts of Student Assessment

A. Decision Making

To what extent has the use of information available from your undergraduate student assessment process influenced the following actions? (circle one number for each item):

Institutional Actions	No action or influence unknown	Action taken, data not influential	Action taken, data somewhat influential	Action taken, data very influential
1. Revising your undergraduate academic mission or goals	1	2	3	4
2. Designing or reorganizing academic programs or majors	1	2	3	4
3. Designing or reorganizing student affairs units	1	2	3	4
4. Allocating resources to academic units	1	2	3	4
5. Modifying student assessment plans, policies, or processes	1	2	3	4
6. Deciding faculty promotion and tenure	1	2	3	4
7. Deciding faculty salary increases or rewards (release time, travel funds, etc.)	1	2	3	4
8. Revising or modifying general education curriculum	1	2	3	4
9. Creating or modifying student out-of-class learning experiences (e.g. internships, service learning)	1	2	3	4
10. Creating or modifying distance learning initiatives	1	2	3	4
11. Modifying instructional or teaching methods	1	2	3	4
12. Modifying student academic support services (e.g. advising, tutoring)	1	2	3	4

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Appendix A. (continued)

B. Institutional Impacts

Have you monitored the following institutional indicators and been able to document the impact of student assessment information on them? (circle one number for each item):

Internal Impacts	Not monitored, do not know	Monitored, negative impact	Monitored, no known impact	Monitored, positive impact
1. Affected campus discussions of undergraduate education	1	2	3	4
2. Contributed to faculty satisfaction	1	2	3	4
3. Contributed to faculty interest in teaching	1	2	3	4
4. Led to changes in instructional or teaching methods used	1	2	3	4
5. Contributed to student satisfaction	1	2	3	4
6. Affected student retention or graduation rates	1	2	3	4
7. Affected student grade performance	1	2	3	4
8. Affected student achievement on external examinations (e.g. professional licensure, GRE)	1	2	3	4
External Impacts				
9. Affected student applications or student acceptance rates	1	2	3	4
10. Affected allocation or share of state funding	1	2	3	4
11. Affected evaluation from regional accreditation agency	1	2	3	4
12. Affected private fund-raising results	1	2	3	4
13. Affected success on grant applications	1	2	3	4
14. Affected communication with external constituents	1	2	3	4
15. Affected institutional reputation or image	1	2	3	4

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VI. Further Studies - Optional

This page will be removed from the questionnaire before it is processed and completion of it is optional. However, we would like to know more about your institution's experience with student assessment and we would like to be able to respond to you personally with a follow up report.

Within the next year several institutions will be invited to participate in a more intensive study of the impacts of their student assessment practices and policies. Would you be interested in participating in a case study?

__ yes
__ possibly
__ no

If you are interested, we would appreciate any additional information regarding your student assessment practices that you believe would be of interest to other institutions. If you believe your approach to student assessment or its impacts are unusual, please describe it briefly (or enclose a report you think captures your experience).

____
____
____
____
____
____
____
____
____

Please provide your name and address if you are interested in receiving a personal summary report of this survey.

Name: ____
Title: ____
Institution: ____
Address: ____
____
____
Phone: ____
E-Mail: ____

Thank you for taking the time to complete this instrument.

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B. Carnegie Classifications of Institutions of Higher Education

Research Universities I: These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate, and give high priority to research. They award 50 or more doctoral degrees[1] each year. In addition, they receive annually $40 million or more in federal support.[2]

Research Universities II: These institutions offer a full range of baccalaureate programs, are committed to graduate education through the doctorate, and give high priority to research. They award 50 or more doctoral degrees[1] each year. In addition, they receive annually between $15.5 million and $40 million in federal support.

Doctoral Universities I: These institutions offer a full range of baccalaureate programs and are committed to graduate education through the doctorate. They award at least 40 doctoral degrees annually in five or more disciplines.[3]

Doctoral Universities II: These institutions offer a full range of baccalaureate programs and are committed to graduate education through the doctorate. They award annually at least ten doctoral degrees-in three or more disciplines-or 20 or more doctoral degrees in one or more disciplines.[3]

Master's (Comprehensive) Universities and Colleges I: These institutions offer a full range of baccalaureate programs and are committed to graduate education through the master's degree. They award 40 or more master's degrees annually in three or more disciplines.[3]

Master's (Comprehensive) Universities and Colleges II: These institutions offer a full range of baccalaureate programs and are committed to graduate education through the

Appendix B. (continued)

master's degree. They award 20 or more master's degrees annually in one or more disciplines.[3]

Baccalaureate (Liberal Arts) Colleges I: These institutions are primarily undergraduate colleges with major emphasis on baccalaureate degree programs. They award 40 percent or more of their baccalaureate degrees in liberal arts fields[4] and are restrictive in admissions.

Baccalaureate Colleges II: These institutions are primarily undergraduate colleges with major emphasis on baccalaureate degree programs. They award less than 40 percent of their baccalaureate degrees in liberal arts fields[4] or are less restrictive in admissions.

Associate of Arts Colleges: These institutions offer associate of arts certificate or degree programs and, with few exceptions, offer no baccalaureate degrees.[5]

Specialized Institutions: These institutions offer degrees ranging from the bachelor's to the doctorate. At least 50 percent of the degrees awarded by these institutions are in a single discipline. Specialized institutions include:

Theological seminaries, Bible colleges and other institutions offering degrees in religion: This category includes institutions at which the primary purpose is to offer religious instruction or train members of the clergy.

Medical schools and medical centers: These institutions award most of their professional degrees in medicine. In some instances, their programs include other health professional schools, such as dentistry, pharmacy, or nursing.

Other separate health profession schools: Institutions in this category award most of their degrees in such fields as chiropractic, nursing, pharmacy, or podiatry.

Appendix B. (continued)

Schools of engineering and technology: The institutions in this category award at least a bachelor's degree in programs limited almost exclusively to technical fields of study.

Schools of business and management: The schools in this category award most of their bachelor's or graduate degrees in business or business-related programs.

Schools of art, music, and design: Institutions in this category award most of their bachelor's or graduate degrees in art, music, design, architecture, or some combination of such fields.

Schools of law: The schools included in this category award most of their degrees in law. The list includes only institutions that are listed as separate campuses in the 1994 Higher Education Directory.

Teachers colleges: Institutions in this category award most of their bachelor's or graduate degrees in education or education-related fields.

Other specialized institutions: Institutions in this category include graduate centers, maritime academies, military institutes, and institutions that do not fit any other classification category.

Tribal colleges and universities: These colleges are, with few exceptions, tribally controlled and located on reservations. They are all members of the American Indian Higher Education Consortium.

Appendix B. (continued)

Notes on definitions:

1. Doctoral degrees include Doctor of Education, Doctor of Juridical Science, Doctor of Public Health, and the Ph.D. in any field.
2. Total federal obligation figures are available from the National Science Foundation's annual report called Federal Support to Universities, Colleges, and Nonprofit Institutions. The years used in averaging total federal obligations are 1989, 1990, and 1991.
3. Distinct disciplines are determined by the U.S. Department of Education's Classification of Instructional Programs 4-digit series.
4. The liberal arts disciplines include English language and literature, foreign languages, letters, liberal and general studies, life sciences, mathematics, philosophy and religion, physical sciences, psychology, social sciences, the visual and performing arts, area and ethnic studies, and multi- and interdisciplinary studies. The occupational and technical disciplines include agriculture, allied health, architecture, business and management, communications, conservation and natural resources, education, engineering, health sciences, home economics, law and legal studies, library and archival sciences, marketing and distribution, military sciences, protective services, public administration and services, and theology.
5. This group includes community, junior, and technical colleges.

(Carnegie Foundation for the Advancement of Teaching, 1994)

C. Best Practices Index

ISSA SURVEY ITEMS	MAXIMUM SCORE
I.A. – TYPE, EXTENT, AND TIMING OF STUDENT ASSESSMENT	
1. Student academic intentions or expectations	7
2. Basic college readiness skills	5
3. Higher order skills	5.5
4. General education competencies	6
5. Major field competence	5
6. Vocational or professional skills	5
7. Personal growth/affective development	5
8. Student experiences and institutional involvement	5.5
9. Student satisfaction with institution	5.5
10. Student academic progress	4
11. Vocational/professional outcomes	4
12. Further education	4
13. Civic/social roles	4
14. Satisfaction and experiences with institution after leaving	4

Appendix C. (continued)

ISSA SURVEY ITEMS	MAXIMUM SCORE
I.C. – OTHER STUDENT ASSESSMENT METHODS	
1. Observations of student performance	4
2. Student portfolios or comprehensive projects	4
3. Student performance in capstone courses	4
4. Student interviews or focus groups	4
5. Transcript analysis	4
6. External examination of students	4
7. Special surveys of or interviews with withdrawing students	4
8. Alumni interviews or focus groups	4
9. Employer interviews or focus groups	4
II.E. – PLANNING AND COORDINATING STUDENT ASSESSMENT	
1. Check all that apply concerning institutional plan	6
2. Institution-wide group for planning?	1
8. Office providing faculty consultation?	1
IV.H. – ACADEMIC PLANNING AND REVIEW	
1. Academic department or undergraduate program planning or review	5
2. General education or core curriculum review	5
3. Course-level review and development	5
4. Review and planning for student academic support	5

Appendix C. (continued)

ISSA SURVEY ITEMS	MAXIMUM SCORE
V.A. – DECISION-MAKING (ACADEMIC)	
1. Revising your undergraduate academic mission or goals	4
2. Designing or reorganizing academic programs or majors	4
3. Designing or reorganizing student affairs units	4
4. Allocating resources to academic units	4
5. Modifying student assessment plans, policies, or processes	4
8. Revising or modifying general education curriculum	4
9. Creating or modifying student out-of-class learning experiences	4
10. Creating or modifying distance learning initiatives	4
11. Modifying instructional or teaching methods	4
12. Modifying student academic support services	4

D. Index of Faculty Involvement in Student Outcomes Assessment Decision-making

ISSA SURVEY ITEMS	MAXIMUM SCORE
II.D. – SUPPORT FOR STUDENT ASSESSMENT	
5. Faculty governance	5
II.E. – PLANNING AND COORDINATING STUDENT ASSESSMENT	
3. Who serves on any institution-wide group for planning and policy setting?	
g. Faculty	1
4. Who has executive responsibility for or who chairs the institution-wide group responsible for the ongoing planning or policy-setting process for undergraduate student assessment?	
f. Faculty member	1
5. Who approves any changes in your institution's plan or policies for undergraduate student assessment?	
h. Academic senate or other faculty committee	1
i. Faculty union	1
6. Who has operational responsibility for your institution's day-to-day undergraduate student assessment activities (e.g., instrument development, data collection, analysis, and reporting)?	
f. Faculty member(s)	1

E. Index of Administrative Involvement in Student Outcomes Assessment Decision-making

ISSA SURVEY ITEMS	MAXIMUM SCORE
II.D. – SUPPORT FOR STUDENT ASSESSMENT	
1. Chief executive officer	5
2. Academic affairs administrators	5
3. Student affairs administrators	5
II.E. – PLANNING AND COORDINATING STUDENT ASSESSMENT	
3. Who serves on any institution-wide group for planning and policy setting? (check all that apply):	1
a. Chief executive officer	
b. Academic affairs administrator(s)/staff	
c. Student affairs administrator(s)/staff	
d. Institutional research administrator(s)/staff	
e. Academic review and evaluation administrator(s)/staff	
f. Student assessment administrator(s)/staff	

Appendix E. (continued)

ISSA SURVEY ITEMS	MAXIMUM SCORE
4. Who has executive responsibility for or who chairs the institution-wide group responsible for the ongoing planning or policy-setting process for undergraduate student assessment? (check all that apply): a. Academic affairs administrator b. Student affairs administrator c. Institutional research officer d. Academic review and evaluation officer e. Student assessment officer	1
5. Who approves any changes in your institution's plan or policies for undergraduate student assessment? (check all that apply): b. Chief executive officer c. Chief academic officer d. Chief student affairs officer e. Institutional research officer f. Academic review and evaluation officer g. Student assessment officer	1

Appendix E. (continued)

ISSA Survey Items	Maximum Score
6. Who has operational responsibility for your institution's day-to-day undergraduate student assessment activities (e.g., instrument development, data collection, analysis, and reporting)? (check all that apply): a. Academic affairs administrator b. Student affairs administrator c. Institutional research officer d. Academic review and evaluation officer e. Student assessment officer	1
7. To whom does the individual with operational responsibility for day-to-day student assessment activities directly report? (check one): a. Chief executive officer b. Chief academic officer c. Chief student affairs officer d. Institutional research officer e. Academic review and evaluation officer	1

F. Index of Funding Sources Used to Improve Student Assessment Practices

ISSA SURVEY ITEMS	MAXIMUM SCORE
III.C. – EXTERNAL SOURCES OF SUPPORT FOR ASSESSMENT (CHECK ALL THAT APPLY):	
1. Has your institution received external grants to improve undergraduate student assessment practices from any of the following?	
a. FIPSE	1
b. Other federal agencies	1
c. A state incentive program	1
d. Private foundations or corporate sources	1
IV.A. – RESOURCE ALLOCATION FOR STUDENT ASSESSMENT (CHECK ALL THAT APPLY):	
1. An explicit operating budget allocation is made to support student assessment.	1
2. An academic budget process that considers student performance indicators in resource allocation to academic units.	1
3. An academic budget process that compares academic units on student performance indicators and allocates resources competitively.	(if any of 2-4 is checked)

Appendix F. (continued)

ISSA SURVEY ITEMS	MAXIMUM SCORE
4. An academic budget process that rewards academic units for improvement based on their own past student performance indicators.	

G. ISSA Survey Forms Received by State

State	Number of Institutions to Which Surveys Were Sent	ISSA Survey Forms Received	Return Rate
Alabama	60	25	42%
Alaska	6	4	67%
Arizona	28	15	54%
Arkansas	41	25	61%
California	191	77	40%
Colorado	34	16	47%
Connecticut	33	19	58%
Washington, DC	9	4	44%
Delaware	7	2	29%
Florida	64	40	63%
Georgia	69	42	61%
Hawaii	15	5	33%
Idaho	10	7	70%
Illinois	111	73	66%
Indiana	58	38	66%
Iowa	51	33	65%

Appendix G. (continued)

State	Number of Institutions to Which Surveys Were Sent	ISSA Survey Forms Received	Return Rate
Kansas	45	24	53%
Kentucky	42	22	52%
Louisiana	64	30	47%
Maine	21	10	48%
Maryland	45	20	44%
Massachusetts	83	41	49%
Michigan	64	54	84%
Minnesota	60	34	57%
Mississippi	32	20	63%
Missouri	55	32	58%
Montana	24	8	33%
Nebraska	24	11	46%
Nevada	7	5	71%
New Hampshire	19	6	32%
New Jersey	47	27	57%
New Mexico	22	8	36%

Appendix G. (continued)

State	Number of Institutions to Which Surveys Were Sent	ISSA Survey Forms Received	Return Rate
New York	161	79	49%
North Carolina	110	60	55%
North Dakota	18	11	61%
Ohio	98	65	66%
Oklahoma	38	25	66%
Oregon	32	13	41%
Pennsylvania	134	59	44%
Rhode Island	8	3	38%
South Carolina	51	29	57%
South Dakota	18	10	56%
Tennessee	54	36	67%
Texas	135	73	54%
Utah	11	8	73%
Vermont	22	8	36%
Virginia	65	46	71%
Washington	50	36	72%

Appendix G. (continued)

State	Number of Institutions to Which Surveys Were Sent	ISSA Survey Forms Received	Return Rate
West Virginia	23	14	61%
Wisconsin	51	34	67%
Wyoming	8	6	75%
Total	2528	1392	55%

Note. Adapted from "Inventory of Institutional Support for Student Assessment" by M. W. Peterson, M. K. Einarson, C. H. Augustine, and D. S. Vaughan, 1999.

VITA

Noel Catchings Womack, IV was born in Tupelo, Mississippi on October 15, 1971. He graduated from Tupelo High School in Tupelo, Mississippi in May 1990. He received the Bachelor of Business Administration in Management from Mississippi State University in Starkville, Mississippi in August 1994. He received the Master of Arts in Higher Education – Student Personnel from The University of Mississippi in Oxford, Mississippi in May 1998.

He is presently employed by The University of Mississippi as a graduate assistant in the Office of University Planning and Institutional Research.

To the Graduate Council:

We are submitting herewith a dissertation written by Noel C. Womack, IV entitled "The Relationships among Selected Characteristics of Student Outcomes Assessment Programs at American Two- and Four-Year Higher Education Institutions." We have examined the final copy of this dissertation for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy with a major in Educational Leadership, Higher Education.

Kathleen Sullivan

Kathleen Sullivan
Co-Chair of the Dissertation Committee

James O. Nichols
Co-Chair of the Dissertation Committee

We have read this dissertation
and recommend its acceptance:

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Margie J. Hobbs

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Dean of The Graduate School

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